Ref 30

LPC# 199 801 0003 Madison County
Chemetco - Hartford
ILD 048 843 809
SF/HRS
Volume 2

EPA Region 5 Records Ctr.
347282

Analytical Results

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

Prepared by:
Office of Site Evaluation
Division of Remediation Management
Bureau of Land

ESAT Controlled Number: ESAT 5.M.00137-pd 7/25/08

DATE: July 25, 2008

IEPA
Attn: Mr. Mark Wagner
1001 North Grand Avenue East
P.O. Box 19276
Springfield, IL 62794-9276

SITE NAME: Chemetco (IL)

Case	Lab	Samples	SDG	Matrix
37448	DataChem	12	ME00E2	soil

Upon receipt of data, please check each package for completeness and note any missing deliverables below.

Send this form back to Sylvia Griffin, Data Management Coordinator after filling in the blanks below.

Data Received by:_____ Date:_____

PROBLEMS:

Please indicate if data is complete, and note if there are any deliverables missing from the cases noted above.

_____

_____

Received by Data Management Coordinator, CRL for file.

Signature:_____ Date:_____

FROM: **U.S. EPA - Region 5**
Sylvia Griffin
Central Regional Laboratory
536 S. Clark, 10th Floor
Chicago, IL 60605

RECEIVED
JUL 30 2008
IEPA-BOL-FSRS

Sent By: Pat Johnson
Data Coordinator
ESAT Region 5 **TechLaw**

Regional Transmittal Form

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: June 3, 2008

SUBJECT: **Review of Data**
Received for Review on: May 30, 2008

FROM: **Stephen L. Ostrodka, Chief (SRT-4J)**
Superfund Field Services Section

TO: **Data User:** IEPA

We have reviewed the data by CADRE for the following case:

Site Name: Chemetco (IL)

Case Number: 37448 **SDG Number:** ME00E2

Number and Type of Samples: 12 Soil Samples

Sample Numbers: ME00E2-E8; ME00F8-F9; ME00G0-G2

Laboratory: DataChem **Hrs for Review:** _____

Following are our findings:

CC: Howard Pham
Region 5 TPO
Mail Code: SRT-4J

Below is a summary of the out-of-control audits and the possible effects on the data for this case:

Twelve (12) soil samples, numbered ME00E2-E8; ME00F8-F9; ME00G0-G2, were collected between 5/6/2008 and 5/7/2008. The lab received the samples on 05/08/2008. Samples ME00E2, ME00E3, ME00E8, and ME00G2 were received in a cooler with a temperature of 8.0° C. Samples are not qualified for this discrepancy. All samples were analyzed for metals and cyanided using the CLP SOW ILM05.4.

Mercury analysis was performed using a Cold Vapor AA Technique. Cyanide analysis was performed using the MIDI Distillation procedure. The remaining inorganic analyses were performed using an Inductively Coupled Plasma-Atomic Emission Spectroscopy (ICP-AES) procedure.

Five prepped sample weights (ME00E2, ME00E7, ME00F9, ME00G0 and ME00G2) were rounded incorrectly for mercury (Case page 204). Reported weights are listed as 0.20g; actual weights should have been reported as 0.21g for ME00E2, ME00E7 and ME00F9 and 0.19 for ME00G0 and ME00G2. Nine prepped sample weights (ME00E3, ME00E4, ME00E5, ME00E6, ME00E7, ME00E8 and ME00G0) were rounded incorrectly for ICP (Case page 203). Reported weights are listed as 1.00g; actual weights should have been reported as 1.01g for ME00E4, ME00E5, ME00E6, ME00E7 and ME00E8 and 0.99g for ME00E3 and ME00G0. Reported results were corrected for these discrepancies. No discrepancies were present in rounding of cyanide values. [revised 2/17/2009]

1. HOLDING TIME:

No defects were found.

2. CALIBRATIONS:

No defects were found for the calibration or the CRQL standard.

3. BLANKS:

The following inorganic samples are associated with an ICB/CCB or preparation blank concentration which is greater than the method detection limit (MDL). The sample result is greater than the MDL.

Hits less than the CRQL are qualified "U". The sample result is raised to the CRQL. Hits greater than the CRQL but less than 10 times the blank are qualified "U" and reported at the sample value.

Beryllium
ME00G1

Cobalt
ME00E2, ME00E3, ME00E8, ME00G1, ME00G2

Copper
ME00E5

Silver
ME00E6, ME00F9, ME00G0, ME00G1, ME00G2 [revised 2/17/2009]

Thallium
ME00E2, ME00E3, ME00E4, ME00E5, ME00G2

The following inorganic samples are associated with a negative ICB/CCB or preparation blank concentration whose absolute value is greater than the method detection limit (MDL). The sample result is also greater than the MDL.

Hits less than 5 times the blank are qualified "J-".

Silver
ME00E2, ME00E3, ME00E4, ME00E5, ME00E7

The following inorganic samples are associated with a negative ICB/CCB or preparation blank concentration whose absolute value is greater than the method detection limit (MDL). The sample result is also greater than the MDL. The samples are also associated with a positive ICSA (see below).

Hits less than 5 times the blank AND less than 10 times the ICSA are qualified "J".

Silver

ME00E6

4. MATRIX SPIKE/MATRIX SPIKE DUPLICATE AND LAB CONTROL SAMPLE:

The following inorganic samples are associated with a matrix spike recovery which is extremely low (<30%) indicating that sample results may be biased low. The required post spike was performed and results were greater than or equal to 75%.

Hits are qualified "J" and non-detects are qualified "UJ".

Antimony

ME00E2, ME00E3, ME00E4, ME00E5, ME00E6, ME00E7, ME00E8, ME00F8, ME00F9, ME00G0, ME00G1, ME00G2

The following inorganic samples are associated with a matrix spike recovery which is high (>125%) indicating that sample results may be biased high. The required post spike was performed and results were less than or equal to 125%.

Hits are qualified "J"; non-detects are not qualified.

Copper

ME00E2, ME00E3, ME00E4, ME00E5, ME00E6, ME00E7, ME00E8, ME00F8, ME00F9, ME00G0, ME00G1, ME00G2

The following inorganic samples are associated with a matrix spike recovery which is low (30-74%) indicating that sample results may be biased low. The required post spike was performed and results were less than 75%.

Hits are qualified "J-" and non-detects are qualified "UJ".

Cyanide

ME00E2, ME00E3, ME00E4, ME00E5, ME00E6, ME00E7, ME00E8, ME00F8, ME00F9, ME00G0, ME00G1, ME00G2

5. LABORATORY AND FIELD DUPLICATE:

The following inorganic samples are associated with duplicate results which did not meet relative percent difference (RPD) primary criteria.

Hits are qualified "J" and non-detects are qualified "UJ".

Barium
ME00E2, ME00E3, ME00E4, ME00E5, ME00E6, ME00E7, ME00E8, ME00F8, ME00F9, ME00G0, ME00G1, ME00G2

The following inorganic samples are associated with duplicate results which did not meet absolute difference (AD) primary criteria.
Hits are qualified "J" and non-detects are qualified "UJ".

Cadmium
ME00E2, ME00E3, ME00E4, ME00E5, ME00E6, ME00E7, ME00E8, ME00F8, ME00F9, ME00G0, ME00G1, ME00G2

No samples were identified at field duplicates.

6. ICP ANALYSIS:

The following inorganic sample results are affected by an interference check "A" sample (ICSA) for which false positive concentration values greater than the MDL were obtained. The sample contains Al, Ca, Fe, or Mg at a level comparable to the ICSA.
Hits less than 10 times the value of the ICSA are qualified "J+"; non-detects are not qualified. Hits greater than 10 times the ICSA are not qualified.

Arsenic
ME00E6

Selenium
ME00E6, ME00F8, ME00G0

Silver
ME00F8

Thallium
ME00E6, ME00F8, ME00G0

The following results are affected by an interference check "A" sample (ICSA) for which false negative concentration values greater than the absolute value of the MDL were obtained. The sample contains Al, Ca, Fe or Mg at a level comparable to that of the ICSA.
Hits less than 10 times the absolute value of the ICSA are qualified "J-", non-detects are qualified "UJ". Hits greater than 10 times the ICSA are not qualified.

Antimony
ME00E6, ME00G0

Vanadium
ME00F8

No defects were found for the serial dilution sample.

7. SAMPLE RESULTS:

The following inorganic samples have analyte concentrations reported above the method detection limit (MDL) but below the quantitation limit (CRQL).
Results are qualified "J".

Antimony
ME00E8, ME00F8

Mercury
ME00E2, ME00E3, ME00E7, ME00E8, ME00F8, ME00G0, ME00G1, ME00G2

Selenium
ME00E2, ME00E3, ME00E4, ME00E5, ME00E6, ME00E7, ME00E8, ME00F8, ME00F9, ME00G0, ME00G1, ME00G2

Silver
ME00E2, ME00E3, ME00E4, ME00E5, ME00E6, ME00E7

Sodium
ME00E2, ME00E3, ME00E5, ME00E6, ME00G0, ME00G1, ME00G2

Thallium
ME00E6, ME00E7, ME00E8, ME00F8, ME00F9, ME00G0, ME00G1

All data, except those qualified above, are acceptable.

CADRE ILM05.4 Data Qualifier Sheet

Qualifiers	Data Qualifier Definitions
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control (QC) criteria. The analyte may or may not be present in the sample.
UJ	The analyte was analyzed for, but not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

Analytical Results (Qualified Data)

Case #: 37448 SDG : ME00E2
Site : CHEMETCO
Lab. : DataChem
Reviewer : PAL
Date : 6/4/2008

Number of Soil Samples : 12
Number of Water Samples : 0

Sample Number :	ME00E2		ME00E3		ME00E4		ME00E5		ME00E6	
Sampling Location :	X221		X222		X101		X102		X103	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg	
Date Sampled :	5/6/2008		5/6/2008		5/6/2008		5/6/2008		5/6/2008	
Time Sampled :										
%Solids :	35.8		65.9		81.8		79.8		72.8	
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
ANALYTE	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALUMINUM	12600		6300		6900		6520		9390	
ANTIMONY	16.8	UJ	9.2	UJ	7.3	UJ	7.4	UJ	8.2	UJ
ARSENIC	11.8		4.2		9.5		12.1		13.7	J+
BARIUM	306	J	216	J	187	J	227	J	225	J
BERYLLIUM	1.6		0.79		0.74		1.1		1.3	
CADMIUM	53.8	J	47.9	J	6.8	J	4.3	J	2.7	J
CALCIUM	9660		4340		4590		2600		4550	
CHROMIUM	20.8		9.8		9.8		10.3		12.7	
COBALT	14.0	U	6.8	U	36.8		11.7		23.2	
COPPER	672	J	105	J	2070	J	3.1	U	1640	J
IRON	24300		13100		9530		1120		16200	
LEAD	209		49.2		21.6		354		145	
MAGNESIUM	5220		2610		3100		2220		3110	
MANGANESE	594		241		1400		600		1380	
MERCURY	0.075	J	0.033	J	0.12	U	0.13	U	0.14	U
NICKEL	515		140		2390		821		922	
POTASSIUM	3990		2110		939		1030		1080	
SELENIUM	2.6	J	1.6	J	0.50	J	0.76	J	0.93	J+
SILVER	1.3	J-	0.37	J-	0.74	J-	0.86	J-	1.4	U
SODIUM	1240	J	388	J	619		162	J	262	J
THALLIUM	2.9	U	2.0	U	3.0	U	3.1	U	1.3	J+
VANADIUM	32.1		17.5		17.9		19.2		28.0	
ZINC	1020		395		378		509		376	
CYANIDE	7.0	UJ	3.8	UJ	3.1	UJ	3.1	UJ	3.4	UJ

Analytical Results (Qualified Data)

Case #: 37448 SDG : ME00E2
Site : CHEMETCO
Lab. : DataChem
Reviewer : PAL
Date : 6/4/2008

Sample Number :	ME00E7		ME00E8		ME00F8		ME00F9		ME00G0	
Sampling Location :	X104		X223		X105		X106		X107	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg	
Date Sampled :	5/6/2008		5/6/2008		5/6/2008		5/6/2008		5/7/2008	
Time Sampled :										
%Solids :	78.9		48.8		77.6		73.4		66.7	
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
ANALYTE	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALUMINUM	5850		11000		4330		7110		9480	
ANTIMONY	7.5	UJ	0.89	J	5.6	J	8.2	UJ	9.1	UJ
ARSENIC	10.8		11.8		22.8		12.1		9.9	J+
BARIUM	185	J	273	J	298	J	213	J	246	J
BERYLLIUM	1.2		2.0		15.1		1.5		1.0	
CADMIUM	1.1	J	22.9	J	37.4	J	2.2	J	3.1	J
CALCIUM	6350		8680		29900		4200		9030	
CHROMIUM	8.6		17.5		13.9		11.0		15.7	
COBALT	8.7		10.1	U	41.9		14.5		7.8	
COPPER	2920	J	3270	J	3690	J	3160	J	204	J
IRON	9270		14800		22500		12800		14900	
LEAD	46		794		2310		184		185	
MAGNESIUM	2230		4130		4400		1990		3760	
MANGANESE	384		374		2940		682		577	
MERCURY	0.015	J	0.084	J	0.12	J	0.14	U	0.082	J
NICKEL	818		1980		951		709		28.2	
POTASSIUM	803		2030		671		844		2420	
SELENIUM	1.1	J	2.8	J	1.8	J	0.91	J	1.7	J
SILVER	0.92	J-	6.1		6.3	J+	0.99	U	1.5	U
SODIUM	8500		1100		10400		1300		51.3	J
THALLIUM	0.62	J	1.5	J	1.4	J+	0.94	J	1.3	J
VANADIUM	16.6		23.3		13.5	J-	21.1		24.6	
ZINC	416		1980		15700		367		355	
CYANIDE	3.2	UJ	5.1	UJ	3.2	UJ	3.4	UJ	3.7	UJ

Analytical Results (Qualified Data)

Case #: 37448 SDG : ME00E2
Site : CHEMETCO
Lab. : DataChem
Reviewer : PAL
Date : 6/4/2008

Sample Number :	ME00G1		ME00G2							
Sampling Location :	X108		X224							
Matrix :	Soil		Soil							
Units :	mg/Kg		mg/Kg							
Date Sampled :	5/7/2008		5/7/2008							
Time Sampled :										
%Solids :	73.2		63.5							
Dilution Factor :	1.0		1.0							
ANALYTE	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALUMINUM	4990		6900							
ANTIMONY	8.2	UJ	9.4	UJ						
ARSENIC	7.1		5.9							
BARIUM	157	J	177	J						
BERYLLIUM	0.68	U	0.88							
CADMIUM	1.6	J	6.0	J						
CALCIUM	4710		5200							
CHROMIUM	8.4		10.9							
COBALT	6.8	U	7.9	U						
COPPER	75.9	J	37.0	J						
IRON	9140		8790							
LEAD	69.1		50.4							
MAGNESIUM	1930		2380							
MANGANESE	421		245							
MERCURY	0.025	J	0.03	J						
NICKEL	15.5		18.6							
POTASSIUM	1690		1540							
SELENIUM	0.71	J	0.80	J						
SILVER	1.4	U	0.64	U						
SODIUM	40.0	J	217	J						
THALLIUM	0.58	J	3.9	U						
VANADIUM	13.6		19.3							
ZINC	158		249							
CYANIDE	3.4	UJ	3.9	UJ						

USEPA Contract Laboratory Program
Inorganic Traffic Report & Chain of Custody Reco

8128025

Case No: 37448
DAS No:
SDG No: ME00E2

L

Date Shipped:	5/7/2008
Carrier Name:	UPS
Airbill:	1Z6215892210027229
Shipped to:	DataChem Laboratories, Inc. 960 West LeVoy Drive Salt Lake City UT 84123 (801) 266-7700

Chain of Custody Record

Sampler Signature: [signature]

	Relinquished By	(Date / Time)	Received By	(Date / Time)
1	[signature]	5/7/08 1200	[signature]	5/8/08 1005
2				
3				
4				

For Lab Use Only

Lab Contract No:	EPA10054
Unit Price:	n/a
Transfer To:	[signature] 5/8/08
Lab Contract No:	
Unit Price:	

INORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		ORGANIC SAMPLE No.	FOR LAB USE ONLY Sample Condition On Receipt
ME00E2	Soil/Sediment/ Jerry Willman	L/G	ICP, Hg,CN (21)	5-303511 (Ice Only) (1)	X221	S: 5/6/2008	10:10		[signature] 5/8/08
ME00E3	Soil/Sediment/ Jerry Willman	L/G	ICP, Hg,CN (21)	5-303512 (Ice Only) (1)	X222	S: 5/6/2008	10:20		
ME00E8	Soil/Sediment/ Jerry Willman	L/G	ICP, Hg,CN (21)	5-303517 (Ice Only) (1)	X223	S: 5/6/2008	11:10		
ME00G2	Soil/Sediment/ Jerry Willman	L/G	ICP, Hg,CN (21)	5-303531 (Ice Only) (1)	X224	S: 5/7/2008	9:15		

- 13 -

Shipment for Case Complete? N	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Cooler Temperature Upon Receipt: 8°	Chain of Custody Seal Number: 89336
Analysis Key: ICP, Hg,CN = CLP ICP Metals, Hg, CN	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G		Custody Seal Intact? [initials] Shipment Iced? YES

TR Number: 5-162075208-050708-0002

LABORATORY COPY

PR provides preliminary results. Requests for preliminary results will increase analytical costs.
Send Copy to: Sample Management Office, Attn: Heather Bauer, CSC, 15000 Conference Center Dr., Chantilly, VA 20151-3819; Phone 703/818-4200; Fax 703/818-4602

USEPA Contract Laboratory Program
Inorganic Traffic Report & Chain of Custody Record

Case No: 37448
DAS No:
SDG No: MENDEZ

L

Date Shipped:	5/7/2008
Carrier Name:	UPS
Airbill:	1Z6215892210027210
Shipped to:	DataChem Laboratories, Inc. 960 West LeVoy Drive Salt Lake City UT 84123 (801) 266-7700

Chain of Custody Record

Sampler Signature: [signature]

Relinquished By	(Date / Time)	Received By	(Date / Time)
1 [signature]	5/7/08 1200	[signature] Edward	5/8/08 / 1005
2			
3			
4			

For Lab Use Only

Lab Contract No:	EPW06054
Unit Price:	N/A
Transfer To:	[signature] 5/8/08
Lab Contract No:	
Unit Price:	

INORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	ORGANIC SAMPLE No.	FOR LAB USE ONLY Sample Condition On Receipt
ME00E4	Soil/Sediment/ Jerry Willman	L/G	ICP, Hg,CN (21)	5-303513 (Ice Only) (1)	X101	S: 5/6/2008 10:55		
ME00E5	Soil/Sediment/ Jerry Willman	L/G	ICP, Hg,CN (21)	5-303514 (Ice Only) (1)	X102	S: 5/6/2008 11:20		
ME00E6	Soil/Sediment/ Jerry Willman	L/G	ICP, Hg,CN (21)	5-303515 (Ice Only) (1)	X103	S: 5/6/2008 12:00		
ME00E7	Soil/Sediment/ Jerry Willman	L/G	ICP, Hg,CN (21)	5-303516 (Ice Only) (1)	X104	S: 5/6/2008 12:05		
ME00E9	Waste/ Jerry Willman	L/G	ICP, Hg,CN (21)	5-303518 (Ice Only) (1)	X301	S: 5/6/2008 12:25		
ME00F0	Waste/ Jerry Willman	L/G	ICP, Hg,CN (21)	5-303519 (Ice Only) (1)	X302	S: 5/6/2008 12:30		
ME00F1	Waste/ Jerry Willman	L/G	ICP, Hg,CN (21)	5-303520 (Ice Only) (1)	X303	S: 5/6/2008 13:30		
ME00F2	Waste/ Jerry Willman	L/G	ICP, Hg,CN (21)	5-303521 (Ice Only) (1)	X304	S: 5/6/2008 13:30		
ME00F3	Waste/ Jerry Willman	L/G	ICP, Hg,CN (21)	5-303522 (Ice Only) (1)	X305	S: 5/6/2008 13:40		
ME00F4	Waste/ Jerry Willman	L/G	ICP, Hg,CN (21)	5-303523 (Ice Only) (1)	X306	S: 5/6/2008 13:50		

[signature] 5/8/08

Shipment for Case Complete?N	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Cooler Temperature Upon Receipt: 4	Chain of Custody Seal Number: 89335
Analysis Key: ICP, Hg,CN = CLP ICP Metals, Hg, CN	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Custody Seal Intact? 4	Shipment Iced? YES

TR Number: 5-162075208-050708-0001

LABORATORY COPY

PR provides preliminary results. Requests for preliminary results will increase analytical costs.
Send Copy to: Sample Management Office, Attn: Heather Bauer, CSC, 15000 Conference Center Dr., Chantilly, VA 20151-3819; Phone 703/818-4200; Fax 703/818-4602

USEPA Contract Laboratory Program
Inorganic Traffic Report & Chain of Custody Record

Case No: 37448
DAS No:
SDG No: ME00E2

L

Date Shipped:	5/7/2008
Carrier Name:	UPS
Airbill:	1Z6215892210027210
Shipped to:	DataChem Laboratories, Inc. 960 West LeVoy Drive Salt Lake City UT 84123 (801) 266-7700

Chain of Custody Record

Sampler Signature:

Relinquished By	(Date / Time)	Received By	(Date / Time)
1	5/7/80 1200		5/8/08 1105
2			
3			
4			

For Lab Use Only

Lab Contract No: EPW06054
Unit Price: N/A
Transfer To:
Lab Contract No:
Unit Price:

INORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	ORGANIC SAMPLE No.	FOR LAB USE ONLY Sample Condition On Receipt
ME00F5	Waste/ Jerry Willman	L/G	ICP, Hg,CN (21)	5-303524 (Ice Only) (1)	X307	S: 5/6/2008 14:30		
ME00F6	Waste/ Jerry Willman	L/G	ICP, Hg,CN (21)	5-303525 (Ice Only) (1)	X308	S: 5/6/2008 14:40		
ME00F7	Waste/ Jerry Willman	L/G	ICP, Hg,CN (21)	5-303526 (Ice Only) (1)	X309	S: 5/6/2008 14:45		
ME00F8	Soil/Sediment/ Jerry Willman	L/G	ICP, Hg,CN (21)	5-303527 (Ice Only) (1)	X105	S: 5/6/2008 15:10		
ME00F9	Soil/Sediment/ Jerry Willman	L/G	ICP, Hg,CN (21)	5-303528 (Ice Only) (1)	X106	S: 5/6/2008 15:15		
ME00G0	Soil/Sediment/ Jerry Willman	L/G	ICP, Hg,CN (21)	5-303529 (Ice Only) (1)	X107	S: 5/7/2008 9:20		
ME00G1	Soil/Sediment/ Jerry Willman	L/G	ICP, Hg,CN (21)	5-303530 (Ice Only) (1)	X108	S: 5/7/2008 9:30		

Shipment for Case Complete?N	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Cooler Temperature Upon Receipt: 4	Chain of Custody Seal Number: 89335
Analysis Key:	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Custody Seal Intact? Y	Shipment Iced? Y

ICP, Hg,CN = CLP ICP Metals, Hg, CN

TR Number: 5-162075208-050708-0001

LABORATORY COPY

PR provides preliminary results. Requests for preliminary results will increase analytical costs.
Send Copy to: Sample Management Office, Attn: Heather Bauer, CSC, 15000 Conference Center Dr., Chantilly, VA 20151-3819; Phone 703/818-4200; Fax 703/818-4602

DATA CHEM LABORATORIES, INC.

SDG NARRATIVE

Case #: 37448
SDG#: ME00E2
Contract #: EP-W-06-054
DCL Set ID#: 8129025
May 28, 2008

General Information

The twelve samples in this SDG were analyzed by methodologies contained in ILM05.4. All concentration, analytical, and method qualifiers are defined in the SOW.

Holding Times

All samples were prepared and analyzed within method required holding times.

Initial and Continuing Calibration

All initial and continuing calibration verification and blank analyses were performed within the designated frequency and recoveries of the verifications and concentrations of the blanks met method acceptance criteria.

Interference Check Sample Analysis

Results for the interference check samples met method acceptance criteria.

Preparation Blanks

The absolute values of all analyte concentrations in the preparation blanks were lower than the Contract Required Quantitation Limits.

Laboratory Control Sample Analysis

Results for the analysis of the LCS met method acceptance criteria.

Matrix Spike Analysis

All matrix spike recoveries were within the limits of 75-125% with the exceptions of antimony, copper and cyanide.

Matrix Duplicate Analysis

All matrix duplicate results met method criteria with the exceptions of barium, cadmium and zinc.

Serial Dilution

ICP-AES Serial Dilution results met method acceptance criteria.

Miscellaneous Comments

All calibration data is linear, please see raw data.
Cooler temps were at 4 and 8°C at time of receipt.

Issues – The TR/COC did not designate laboratory QC, we selected sample ME00G2 for this SDG.

Example Equations

<u>Method HS1:</u> $C \times DF \times \frac{Vf}{Wi} \div S = Concentration(\mu g/g) = Concentration\ (mg/Kg)$

2

960 West LeVoy Drive • Salt Lake City, Utah 84123-2502 • (800) 356-9135 • (801) 266-7700 • Fax (801) 268-9992
www.datachem.com

Method CS1: $C \times DF \times \frac{Vf}{Wi} \div S = Concentration(\mu g/g) = Concentration\ (mg/Kg)$

Method DS2: $C \times DF \times \frac{Vf}{Wi} \div S = Concentration(\mu g/g) = Concentration\ (mg/Kg)$

C = Instrument value in µg/L (The average of all replicate integrations).
Vf = Final digestion volume (L)
Wi = Initial digestion Weight (g)
DF = Dilution Factor
S = % Solids/100

3

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COVER PAGE

Lab Name: DATACHEM LABORATORIES Contract: EP-W-06-054

Lab Code: DATAC Case No.: 37448 NRAS No.: _____ SDG No.: ME00E2

SOW No.: ILM05.4

EPA Sample No.	Lab Sample ID
ME00E2	8129025001
ME00E3	8129025002
ME00E4	8129025003
ME00E5	8129025004
ME00E6	8129025005
ME00E7	8129025006
ME00E8	8129025007
ME00F8	8129025008
ME00F9	8129025009
ME00G0	8129025010
ME00G1	8129025011
ME00G2	8129025012
ME00G2D	8129025014
ME00G2S	8129025013

		ICP-AES	ICP-MS
Were ICP-AES and ICP-MS Interelement corrections applied?	(Yes/No)	YES	NO
Were ICP-AES and ICP-MS background corrections applied?	(Yes/No)	YES	NO
If yes - were raw data generated before application of background corrections?	(Yes/No)	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 (or via an alternate means of electronic transmission, if approved in advance by USEPA) has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: _____ Name: Neil Edwards

Date: 05/28/2008 Title: Chemist

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3-IN
BLANKS

Lab Name: DATACHEM LABORATORIES Contract: EP-W-06-054

Lab Code: DATAC Case No.: 37448 NRAS No.: _____ SDG No.: ME00E2

Preparation Blank Matrix (soil/water): SOIL

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

	Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank		
Analyte		C	1	C	2	C	3	C		C	M
Aluminum	20.639	J	30.222	J	200.000	U	200.000	U	20.000	U	P
Antimony	60.000	U	60.000	U	60.000	U	60.000	U	6.000	U	P
Arsenic	10.000	U	10.000	U	10.000	U	10.000	U	1.000	U	P
Barium	0.720	J	0.580	J	0.825	J	200.000	U	20.000	U	P
Beryllium	5.000	U	5.000	U	0.090	J	5.000	U	0.500	U	P
Cadmium	5.000	U	5.000	U	5.000	U	0.093	J	0.013	J	P
Calcium	11.595	J	11.246	J	5000.000	U	5000.000	U	11.502	J	P
Chromium	10.000	U	10.000	U	10.000	U	10.000	U	1.000	U	P
Cobalt	50.000	U	0.486	J	0.414	J	0.590	J	5.000	U	P
Copper	25.000	U	25.000	U	3.512	J	25.000	U	2.500	U	P
Iron	100.000	U	100.000	U	12.709	J	100.000	U	10.000	U	P
Lead	10.000	U	10.000	U	10.000	U	-0.947	J	1.000	U	P
Magnesium	5000.000	U	5000.000	U	5000.000	U	5000.000	U	500.000	U	P
Manganese	15.000	U	15.000	U	1.025	J	-0.281	J	1.500	U	P
Mercury	-0.034	J	-0.049	J	-0.054	J	-0.042	J	-0.027	J	CV
Nickel	40.000	U	40.000	U	1.785	J	40.000	U	4.000	U	P
Potassium	5000.000	U	5000.000	U	5000.000	U	5000.000	U	500.000	U	P
Selenium	35.000	U	35.000	U	35.000	U	35.000	U	3.500	U	P
Silver	-0.963	J	-1.617	J	-1.570	J	2.310	J	-0.308	J	P
Sodium	5000.000	U	5000.000	U	5000.000	U	5000.000	U	500.000	U	P
Thallium	25.000	U	0.979	J	25.000	U	25.000	U	2.500	U	P
Vanadium	50.000	U	50.000	U	1.200	J	50.000	U	5.000	U	P
Zinc	60.000	U	60.000	U	60.000	U	60.000	U	0.609	J	P
Cyanide	-4.101	J	-4.709	J	-2.710	J	10.000	U	2.500	U	AS

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3-IN
BLANKS

Lab Name: DATACHEM LABORATORIES Contract: EP-W-06-054

Lab Code: DATAC Case No.: 37448 NRAS No.: _____ SDG No.: ME00E2

Preparation Blank Matrix (soil/water): SOIL

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

	Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank		
Analyte		C	1	C	2	C	3	C		C	M
Aluminum			200.000	U							P
Antimony			60.000	U							P
Arsenic			10.000	U							P
Barium			0.633	J							P
Beryllium			5.000	U							P
Cadmium			5.000	U							P
Calcium			20.739	J							P
Chromium			10.000	U							P
Cobalt			0.395	J							P
Copper			25.000	U							P
Iron			11.835	J							P
Lead			10.000	U							P
Magnesium			5000.000	U							P
Manganese			0.456	J							P
Mercury											NR
Nickel			40.000	U							P
Potassium			5000.000	U							P
Selenium			35.000	U							P
Silver											NR
Sodium			5000.000	U							P
Thallium			25.000	U							P
Vanadium			50.000	U							P
Zinc			60.000	U							P
Cyanide			10.000	U							AS

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4A-IN
ICP-AES INTERFERENCE CHECK SAMPLE

Lab Name: DATACHEM LABORATORIES Contract: EP-W-06-054

Lab Code: DATAC Case No.: 37448 NRAS No.: _____ SDG No.: ME00E2

ICP-AES Instrument ID: ICP07 ICS Source: EPA(1206)

Concentration Units: ug/L

Analyte	True		Initial Found				Final Found			
	Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R	Sol. A	%R	Sol. AB	%R
Aluminum	244000		255000	104			254000	104		
Antimony	0.0		-0.075				-2.1			
Arsenic	0.0		0.72				1.0			
Barium	2.0		2.7	135			2.7	135		
Beryllium	0.0		0.56				0.45			
Cadmium	0.0		0.59				0.55			
Calcium	235000		256000	109			255000	109		
Chromium	43.0		49.1	114			48.2	112		
Cobalt	4.0		3.2	80			3.0	75		
Copper	23.0		25.2	110			25.1	109		
Iron	95600		101000	106			100000	105		
Lead	10.0		20.5	205			19.5	195		
Magnesium	248000		274000	111			274000	111		
Manganese	19.0		20.3	107			19.9	105		
Nickel	21.0		24.6	117			24.6	117		
Potassium	0.0		-8.2				-12.8			
Selenium	0.0		2.3				3.7			
Silver										
Sodium	0.0		835.				845.			
Thallium	0.0		7.0				6.5			
Vanadium	0.0		-8.3				-8.8			
Zinc	28.0		36.3	130			36.2	129		

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4A-IN
ICP-AES INTERFERENCE CHECK SAMPLE

Lab Name: DATACHEM LABORATORIES Contract: EP-W-06-054

Lab Code: DATAC Case No.: 37448 NRAS No.: _____ SDG No.: ME00E2

ICP-AES Instrument ID: ICP07 ICS Source: EPA(0203)

Concentration Units: ug/L

Analyte	True		Initial Found				Final Found			
	Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R	Sol. A	%R	Sol. AB	%R
Aluminum		241000			257000	107			258000	107
Antimony		589.			653.	111			653.	111
Arsenic		101.			113.	112			111.	110
Barium		495.			508.	103			520.	105
Beryllium		475.			506.	107			509.	107
Cadmium		940.			1070	114			1070	114
Calcium		231000			261000	113			259000	112
Chromium		511.			570.	112			569.	111
Cobalt		461.			514.	111			516.	112
Copper		548.			540.	99			545.	99
Iron		94800			102000	108			102000	108
Lead		61.0			74.2	122			72.5	119
Magnesium		251000			278000	111			278000	111
Manganese		502.			533.	106			532.	106
Nickel		984.			1070	109			1070	109
Potassium		0.0			-31.2				-38.7	
Selenium		53.0			56.7	107			60.4	114
Silver										
Sodium		0.0			844.				869.	
Thallium		103.			109.	106			108.	105
Vanadium		494.			494.	100			500.	101
Zinc		1030			1090	106			1090	106

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4A-IN
ICP-AES INTERFERENCE CHECK SAMPLE

Lab Name: DATACHEM LABORATORIES Contract: EP-W-06-054

Lab Code: DATAC Case No.: 37448 NRAS No.: _____ SDG No.: ME00E2

ICP-AES Instrument ID: ICP07 ICS Source: EPA(1206)

Concentration Units: ug/L

Analyte	True		Initial Found				Final Found			
	Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R	Sol. A	%R	Sol. AB	%R
Aluminum	244000						254000	104		
Antimony	0.0						-2.3			
Arsenic	0.0						2.3			
Barium	2.0						2.7	135		
Beryllium	0.0						0.42			
Cadmium	0.0						0.44			
Calcium	235000						256000	109		
Chromium	43.0						48.2	112		
Cobalt	4.0						2.9	73		
Copper	23.0						24.8	108		
Iron	95600						100000	105		
Lead	10.0						21.2	212		
Magnesium	248000						274000	111		
Manganese	19.0						19.9	105		
Nickel	21.0						24.9	119		
Potassium	0.0						-30.6			
Selenium	0.0						1.2			
Silver										
Sodium	0.0						854.			
Thallium	0.0						6.0			
Vanadium	0.0						-7.3			
Zinc	28.0						35.0	125		

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4A-IN
ICP-AES INTERFERENCE CHECK SAMPLE

Lab Name: DATACHEM LABORATORIES Contract: EP-W-06-054

Lab Code: DATAC Case No.: 37448 NRAS No.: _____ SDG No.: ME00E2

ICP-AES Instrument ID: ICP07 ICS Source: EPA(0203)

Concentration Units: ug/L

Analyte	True		Initial Found				Final Found			
	Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R	Sol. A	%R	Sol. AB	%R
Aluminum		241000							255000	106
Antimony		589.							653.	111
Arsenic		101.							112.	111
Barium		495.							512.	103
Beryllium		475.							500.	105
Cadmium		940.							1060	113
Calcium		231000							256000	111
Chromium		511.							567.	111
Cobalt		461.							514.	111
Copper		548.							538.	98
Iron		94800							100000	105
Lead		61.0							72.7	119
Magnesium		251000							274000	109
Manganese		502.							523.	104
Nickel		984.							1070	109
Potassium		0.0							1.8	
Selenium		53.0							60.7	115
Silver										
Sodium		0.0							860.	
Thallium		103.							108.	105
Vanadium		494.							487.	99
Zinc		1030							1080	105

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4A-IN
ICP-AES INTERFERENCE CHECK SAMPLE

Lab Name: DATACHEM LABORATORIES Contract: EP-W-06-054

Lab Code: DATAC Case No.: 37448 NRAS No.: _____ SDG No.: ME00E2

ICP-AES Instrument ID: ICP07 ICS Source: EPA(1206)

Concentration Units: ug/L

Analyte	True		Initial Found				Final Found			
	Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R	Sol. A	%R	Sol. AB	%R
Aluminum	244000		255000	104			256000	105		
Antimony										
Arsenic										
Barium										
Beryllium										
Cadmium										
Calcium	235000		247000	105			257000	109		
Chromium										
Cobalt										
Copper										
Iron	95600		98400	103			100000	105		
Lead										
Magnesium	248000		266000	107			273000	110		
Manganese										
Nickel										
Potassium										
Selenium										
Silver	0.0		11.0				12.1			
Sodium										
Thallium										
Vanadium										
Zinc										

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4A-IN
ICP-AES INTERFERENCE CHECK SAMPLE

Lab Name: DATACHEM LABORATORIES Contract: EP-W-06-054

Lab Code: DATAC Case No.: 37448 NRAS No.: _____ SDG No.: ME00E2

ICP-AES Instrument ID: ICP07 ICS Source: EPA(0203)

Concentration Units: ug/L

Analyte	True		Initial Found				Final Found			
	Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R	Sol. A	%R	Sol. AB	%R
Aluminum		241000			255000	106			257000	107
Antimony										
Arsenic										
Barium										
Beryllium										
Cadmium										
Calcium		231000			250000	108			260000	113
Chromium										
Cobalt										
Copper										
Iron		94800			98700	104			101000	107
Lead										
Magnesium		251000			267000	106			274000	109
Manganese										
Nickel										
Potassium										
Selenium										
Silver		206.			217.	105			223.	108
Sodium										
Thallium										
Vanadium										
Zinc										

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5A-IN
MATRIX SPIKE SAMPLE RECOVERY

EPA Sample No.
ME00G2S

Lab Name: DATACHEM LABORATORIES Contract: EP-W-06-054

Lab Code: DATAC Case No.: 37448 NRAS No.: _____ SDG No.: ME00E2

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

% Solids for Sample: 63.5

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	4.0705	J	9.4488	U	31.50	13	N	P
Arsenic	75-125	19.2635		5.8809		12.60	106		P
Barium	75-125	869.9003		176.7611		629.92	110		P
Beryllium	75-125	17.3370		0.8817		15.75	104		P
Cadmium	75-125	20.0562		5.9540		15.75	90		P
Calcium									NR
Chromium	75-125	78.7900		10.8542		62.99	108		P
Cobalt	75-125	170.1470		4.5929	J	157.48	105		P
Copper	75-125	162.9344		36.9543		78.74	160	N	P
Iron									NR
Lead		83.7024		50.4142		6.30	528		P
Magnesium									NR
Manganese	75-125	421.4278		245.2756		157.48	112		P
Mercury	75-125	0.8396		0.0283	J	0.79	103		CV
Nickel	75-125	184.4829		18.5732		157.48	105		P
Potassium									NR
Selenium	75-125	16.2383		0.8012	J	15.75	98		P
Silver	75-125	16.6326		0.6376	J	15.75	102		P
Sodium									NR
Thallium	75-125	16.8908		0.7567	J	15.75	102		P
Vanadium	75-125	180.5407		19.2871		157.48	102		P
Zinc	75-125	388.6247		248.8189		157.48	89		P
Cyanide	75-125	5.5910		3.9370	U	7.87	71	N	AS

Comments:

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5B-IN

POST-DIGESTION SPIKE SAMPLE RECOVERY

EPA Sample No.

ME00G2A

Lab Name: DATACHEM LABORATORIES Contract: EP-W-06-054

Lab Code: DATAC Case No.: 37448 NRAS No.: _____ SDG No.: ME00E2

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

% Solids for Sample: 63.5

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

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum									NR
Antimony		114.42		60.00	U	120.00	95		P
Arsenic									NR
Barium									NR
Beryllium									NR
Cadmium									NR
Calcium									NR
Chromium									NR
Cobalt									NR
Copper		716.90		234.66		469.00	103		P
Iron									NR
Lead									NR
Magnesium									NR
Manganese									NR
Mercury									NR
Nickel									NR
Potassium									NR
Selenium									NR
Silver									NR
Sodium									NR
Thallium									NR
Vanadium									NR
Zinc									NR
Cyanide		105.00		50.00	U	100.00	105		AS

Comments:

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6-IN
DUPLICATES

EPA Sample No.

ME00G2D

Lab Name: DATACHEM LABORATORIES Contract: EP-W-06-054

Lab Code: DATAC Case No.: 37448 NRAS No.: _____ SDG No.: ME00E2

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

% Solids for Sample: 63.5 % Solids for Duplicate: 63.5

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

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum		6898.1627		6897.6378		0		P
Antimony		9.4488	U	9.4488	U			P
Arsenic	1.575	5.8809		6.0128		2		P
Barium		176.7611		271.9318		42	*	P
Beryllium	0.787	0.8817		0.8336		6		P
Cadmium	0.787	5.9540		2.2446		90	*	P
Calcium		5198.3202		4858.3202		7		P
Chromium		10.8542		11.2506		4		P
Cobalt		4.5929	J	4.2479	J	8		P
Copper		36.9543		45.2787		20		P
Iron		8793.1234		10393.8583		17		P
Lead		50.4142		58.8562		15		P
Magnesium	787.402	2376.7979		2336.1155		2		P
Manganese		245.2756		241.6850		1		P
Mercury		0.0283	J	0.0405	J	35		CV
Nickel	6.299	18.5732		16.7685		10		P
Potassium	787.402	1542.0945		1510.4882		2		P
Selenium		0.8012	J	1.0804	J	30		P
Silver		0.6376	J	0.5925	J	7		P
Sodium		217.0236	J	207.1076	J	5		P
Thallium		0.7567	J	1.0294	J	31		P
Vanadium	7.874	19.2871		20.8441		8		P
Zinc		248.8189		183.5538		30	*	P
Cyanide		3.9370	U	3.9370	U			AS

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9-IN
METHOD DETECTION LIMITS (ANNUALLY)

Lab Name: DATACHEM LABORATORIES Contract: EP-W-06-054

Lab Code: DATAC Case No.: 37448 NRAS No.: _____ SDG No.: ME00E2

Instrument Type: CV Instrument ID: AACV01 Date: 01/11/2008

Preparation Method: CS1

Concentration Units (ug/L or mg/kg): mg/kg

Analyte	Wavelength /Mass	CRQL	MDL
Aluminum			
Antimony			
Arsenic			
Barium			
Beryllium			
Cadmium			
Calcium			
Chromium			
Cobalt			
Copper			
Iron			
Lead			
Magnesium			
Manganese			
Mercury	253.70	0.1	0.012
Nickel			
Potassium			
Selenium			
Silver			
Sodium			
Thallium			
Vanadium			
Zinc			
Cyanide			

Comments:

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9-IN
METHOD DETECTION LIMITS (ANNUALLY)

Lab Name: DATACHEM LABORATORIES Contract: EP-W-06-054

Lab Code: DATAC Case No.: 37448 NRAS No.: _____ SDG No.: ME00E2

Instrument Type: P Instrument ID: ICP07 Date: 01/12/2008

Preparation Method: NP1

Concentration Units (ug/L or mg/kg): ug/L

Analyte	Wavelength /Mass	CRQL	MDL
Aluminum	308.22	200	20.0
Antimony	206.83	60	1.8
Arsenic	189.04	10	1.5
Barium	455.40	200	0.33
Beryllium	313.11	5.0	0.089
Cadmium	214.44	5.0	0.084
Calcium	317.93	5000	5.9
Chromium	205.55	10	0.73
Cobalt	228.62	50	0.32
Copper	324.75	25	2.6
Iron	259.94	100	9.0
Lead	220.35	10	0.94
Magnesium	279.08	5000	26.7
Manganese	257.61	15	0.26
Mercury			
Nickel	231.60	40	1.7
Potassium	766.49	5000	80.4
Selenium	196.09	35	2.6
Silver	328.07	10	0.28
Sodium	589.59	5000	41.6
Thallium	190.86	25	0.77
Vanadium	292.40	50	0.40
Zinc	206.20	60	2.7
Cyanide			

Comments:

USEPA - CLP

9-IN
METHOD DETECTION LIMITS (ANNUALLY)

Lab Name: DATACHEM LABORATORIES Contract: EP-W-06-054

Lab Code: DATAC Case No.: 37448 NRAS No.: _____ SDG No.: ME00E2

Instrument Type: P Instrument ID: ICP07 Date: 01/05/2008

Preparation Method: HS1

Concentration Units (ug/L or mg/kg): mg/kg

Analyte	Wavelength /Mass	CRQL	MDL
Aluminum	308.22	20	4.1
Antimony	206.83	6.0	0.33
Arsenic	189.04	1.0	0.25
Barium	455.40	20	0.12
Beryllium	313.11	0.5	0.012
Cadmium	214.44	0.5	0.011
Calcium	317.93	500	10.7
Chromium	205.55	1.0	0.46
Cobalt	228.62	5.0	0.064
Copper	324.75	2.5	0.45
Iron	259.94	10	4.1
Lead	220.35	1.0	0.22
Magnesium	279.08	500	5.8
Manganese	257.61	1.5	0.062
Mercury			
Nickel	231.60	4.0	0.33
Potassium	766.49	500	4.2
Selenium	196.09	3.5	0.26
Silver	328.07	1.0	0.047
Sodium	589.59	500	3.7
Thallium	190.86	2.5	0.17
Vanadium	292.40	5.0	0.063
Zinc	206.20	6.0	0.34
Cyanide			

Comments:

USEPA - CLP

9-IN
METHOD DETECTION LIMITS (ANNUALLY)

Lab Name: DATACHEM LABORATORIES Contract: EP-W-06-054

Lab Code: DATAC Case No.: 37448 NRAS No.: _____ SDG No.: ME00E2

Instrument Type: AS Instrument ID: WET01 Date: 01/10/2008

Preparation Method: NP1

Concentration Units (ug/L or mg/kg): ug/L

Analyte	Wavelength /Mass	CRQL	MDL
Aluminum			
Antimony			
Arsenic			
Barium			
Beryllium			
Cadmium			
Calcium			
Chromium			
Cobalt			
Copper			
Iron			
Lead			
Magnesium			
Manganese			
Mercury			
Nickel			
Potassium			
Selenium			
Silver			
Sodium			
Thallium			
Vanadium			
Zinc			
Cyanide	570.00	10	1.6

Comments:

USEPA - CLP

9-IN
METHOD DETECTION LIMITS (ANNUALLY)

Lab Name: DATACHEM LABORATORIES Contract: EP-W-06-054

Lab Code: DATAC Case No.: 37448 NRAS No.: _____ SDG No.: ME00E2

Instrument Type: AS Instrument ID: WET01 Date: 01/09/2008

Preparation Method: DS2

Concentration Units (ug/L or mg/kg): mg/kg

Analyte	Wavelength /Mass	CRQL	MDL
Aluminum			
Antimony			
Arsenic			
Barium			
Beryllium			
Cadmium			
Calcium			
Chromium			
Cobalt			
Copper			
Iron			
Lead			
Magnesium			
Manganese			
Mercury			
Nickel			
Potassium			
Selenium			
Silver			
Sodium			
Thallium			
Vanadium			
Zinc			
Cyanide	570.00	2.5	0.91

Comments:

USEPA - CLP

13-IN
ANALYSIS RUN LOG

Lab Name: DATACHEM LABORATORIES Contract: EP-W-06-054

Lab Code: DATAC Case No.: 37448 NRAS No.: _____ SDG No.: ME00E2

Instrument ID: ICP07 Analysis Method: P

Start Date: 05/27/2008 End Date: 05/27/2008

EPA Sample No.	D/F	Time	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	1.0	1030	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X			
S1500	1.0	1035			X		X	X						X						X			X					
S10000	1.0	1040		X		X				X	X	X				X		X						X	X			
S50000	1.0	1045	X						X				X		X				X			X						
ICV	1.0	1050	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X			
ICB	1.0	1055	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X			
CRII	1.0	1059	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X			
ICSAI	1.0	1104	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X			
ICSABI	1.0	1109	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X			
CCV	1.0	1114	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X			
CCB	1.0	1119	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X			
PBS	1.0	1124	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X			
LCSS	1.0	1129	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X			
ME00G2	1.0	1134	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X			
ME00G2S	1.0	1139		X	X	X	X	X		X	X	X		X		X		X		X			X	X	X			
ME00G2D	1.0	1144	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X			
ME00G2L	5.0	1148	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X			
ME00E2	1.0	1153	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X			
ME00E3	1.0	1158	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X			
ME00E4	1.0	1203	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X			
ME00E5	1.0	1208	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X			
CCV2	1.0	1213	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X			
CCB2	1.0	1217	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X			
ME00E6	1.0	1222	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X			
ME00E7	1.0	1227	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X			
ME00E8	1.0	1232	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X			
ME00F8	1.0	1237	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X				
ME00F9	1.0	1242	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X			
ME00G0	1.0	1247	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X			
ME00G1	1.0	1252	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X			
CRIF	1.0	1257	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X			
ICSAF	1.0	1302	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X			
ICSABF	1.0	1307	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X			
CCV3	1.0	1312	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X			
CCB3	1.0	1316	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X			
ME00G2A	1.0	1321		X								X																

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13-IN
ANALYSIS RUN LOG

Lab Name: DATACHEM LABORATORIES Contract: EP-W-06-054

Lab Code: DATAC Case No.: 37448 NRAS No.: _____ SDG No.: ME00E2

Instrument ID: ICP07 Analysis Method: P

Start Date: 05/27/2008 End Date: 05/27/2008

EPA Sample No.	D/F	Time	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		
ME00F8	10.	1326																							X			
CRIF2	1.0	1331	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X			
ICSAF2	1.0	1336	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X			
ICSABF2	1.0	1341	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X			
CCV4	1.0	1346	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X			
CCB4	1.0	1351	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X			

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13-IN
ANALYSIS RUN LOG

Lab Name: DATACHEM LABORATORIES Contract: EP-W-06-054

Lab Code: DATAC Case No.: 37448 NRAS No.: _____ SDG No.: ME00E2

Instrument ID: ICP07 Analysis Method: P

Start Date: 05/27/2008 End Date: 05/27/2008

EPA Sample No.	D/F	Time	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	1.0	1733																			X							
S1500	1.0	1738																			X							
S10000	1.0	1743																										
S50000	1.0	1748																										
ICV2	1.0	1753																			X							
ICB2	1.0	1758																			X							
CRII2	1.0	1803																			X							
ICSAI2	1.0	1808	X						X				X		X						X							
ICSABI2	1.0	1813	X						X				X		X						X							
CCV5	1.0	1818																			X							
CCB5	1.0	1823																			X							
PBS	1.0	1828																			X							
LCSS	1.0	1833																			X							
ME00E2	1.0	1838																			X							
ME00E3	1.0	1843																			X							
ME00E4	1.0	1847																			X							
ME00E5	1.0	1852																			X							
ME00E6	1.0	1857																			X							
ME00E7	1.0	1902																			X							
ME00E8	1.0	1907																			X							
ME00F8	1.0	1912																			X							
CCV6	1.0	1917																			X							
CCB6	1.0	1922																			X							
ME00F9	1.0	1927																			X							
ME00G0	1.0	1932																			X							
ME00G1	1.0	1937																			X							
ME00G2	1.0	1941																			X							
ME00G2S	1.0	1946																			X							
ME00G2D	1.0	1951																			X							
ME00G2L	5.0	1956																			X							
CRIF3	1.0	2001																			X							
ICSAF3	1.0	2006	X						X				X		X						X							
ICSABF3	1.0	2011	X						X				X		X						X							
CCV7	1.0	2016																			X							
CCB7	1.0	2020																			X							

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13-IN
ANALYSIS RUN LOG

Lab Name: DATACHEM LABORATORIES Contract: EP-W-06-054

Lab Code: DATAC Case No.: 37448 NRAS No.: _____ SDG No.: ME00E2

Instrument ID: AACV01 Analysis Method: CV

Start Date: 05/21/2008 End Date: 05/21/2008

EPA Sample No.	D/F	Time	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	1.0	0950															X											
S0.2	1.0	0952															X											
S0.5	1.0	0953															X											
S1.0	1.0	0955															X											
S5.0	1.0	0956															X											
S10	1.0	0958															X											
ICV	1.0	0959															X											
ICB	1.0	1001															X											
CRII	1.0	1002															X											
CCV	1.0	1004															X											
CCB	1.0	1005															X											
PBS	1.0	1007															X											
LCSS	1.0	1008															X											
ME00E2	1.0	1009															X											
ME00E3	1.0	1011															X											
ME00E4	1.0	1012															X											
ME00E5	1.0	1014															X											
ME00E6	1.0	1015															X											
ME00E7	1.0	1017															X											
CCV2	1.0	1018															X											
CCB2	1.0	1020															X											
ME00E8	1.0	1021															X											
ME00F8	1.0	1023															X											
ME00F9	1.0	1024															X											
ME00G0	1.0	1026															X											
ME00G1	1.0	1027															X											
ME00G2	1.0	1029															X											
ME00G2S	1.0	1030															X											
ME00G2D	1.0	1032															X											
CRIF	1.0	1033															X											
CCV3	1.0	1034															X											
CCB3	1.0	1036															X											

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13-IN
ANALYSIS RUN LOG

Lab Name: DATACHEM LABORATORIES Contract: EP-W-06-054

Lab Code: DATAC Case No.: 37448 NRAS No.: _____ SDG No.: ME00E2

Instrument ID: WET01 Analysis Method: AS

Start Date: 05/15/2008 End Date: 05/15/2008

EPA Sample No.	D/F	Time	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	1.0	1426																								X		
S10	1.0	1428																								X		
S50	1.0	1429																								X		
S100	1.0	1430																								X		
S200	1.0	1430																								X		
S300	1.0	1433																								X		
S400	1.0	1433																								X		
ICV	1.0	1434																								X		
ICB	1.0	1434																								X		
CRII	1.0	1437																								X		
CCV1	1.0	1437																								X		
CCB1	1.0	1438																								X		
MIDRANGE	1.0	1438																								X		
LCSS	1.0	1441																								X		
PBS	1.0	1441																								X		
ME00E2	1.0	1442																								X		
ME00E3	1.0	1443																								X		
ME00E4	1.0	1445																								X		
ME00E5	1.0	1446																								X		
ME00E6	1.0	1446																								X		
ME00E7	1.0	1447																								X		
CCV2	1.0	1449																								X		
CCB2	1.0	1450																								X		
ME00E8	1.0	1451																								X		
ME00F8	1.0	1451																								X		
ME00F9	1.0	1454																								X		
ME00G0	1.0	1454																								X		
ME00G1	1.0	1455																								X		
ME00G2	1.0	1455																								X		
ME00G2D	1.0	1502																								X		
ME00G2S	1.0	1503																								X		
CRIF	1.0	1504																								X		
CCV3	1.0	1504																								X		
CCB3	1.0	1507																								X		
ME00G2A	1.0	1525																								X		
CRIF2	1.0	1525																								X		

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13-IN
ANALYSIS RUN LOG

Lab Name: DATACHEM LABORATORIES Contract: EP-W-06-054

Lab Code: DATAC Case No.: 37448 NRAS No.: _____ SDG No.: ME00E2

Instrument ID: WET01 Analysis Method: AS

Start Date: 05/15/2008 End Date: 05/15/2008

EPA Sample No.	D/F	Time	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		
CCV4	1.0	1526																								X		
CCB4	1.0	1526																								X		

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V
ESD Central Regional Laboratory
Data Tracking Form for Contract Samples

Sample Delivery Group: ME00E2 CERCLIS No: ILD48843809

Case No: 37448 Site Name/Location: Chemetco (IL)

Contractor or EPA Lab: Data Chem Data User: IEPA

No. of Samples: 12 Date Sampled or Date Received: 30 May 08

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: 12 No. of samples received: ____

Received by: pdavis Date: 30 May 08

Received by LSSS: pdavis Date: 2 June 08

Review started: 6/3/08 Reviewer Signature: [signature]

Total time spent on review: ~~12~~ 20.5 92 7/25/08 Date review completed: 6/4/08
fl w 7-24-08

Copied by: R. C. Harvey Date: July 25, 2008

Mailed to user by: pdavis Date: 28 July 08

DATA USER:
Please fill in the blanks below and return this form to:
Sylvia Griffin, Data Mgmt. Coordinator, Region V, ML-10C

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. Date: ____

ESAT Controlled Number: ESAT5.17.00045-pd 6 June 08

DATE: June 6, 2008

IEPA
Attn: Mr. Mark Wagner
1001 North Grand Avenue East
P.O. Box 19276
Springfield, IL 62794-9276

SITE NAME: Chemetco (IL)

CASE NO.	LAB	SAMPLES	SDG	MATRIX
37448	DataChem	20	ME00C2	soil

Upon receipt of data, please check each package for completeness and note any missing deliverables below.

Send this form back to Sylvia Griffin, Data Management Coordinator after filling in the blanks below.

Data Received by:_____ Date:_____

PROBLEMS:

Please indicate if data is complete, and note if there are any deliverables missing from the cases noted above.

_____

_____

Received by Data Management Coordinator, CRL for file.

Signature:_____ Date:_____

FROM: **U.S. EPA - Region 5**
Sylvia Griffin
Central Regional Laboratory
536 S. Clark, 10th Floor
Chicago, IL 60605

RECEIVED
JUN 11 2008
IEPA-BOL-FSRS

Sent By: Pat Johnson
Data Coordinator
ESAT Region 5 **TechLaw**

Controlled Document

ESAT5.15.00024
acf 6-5-08

Regional Transmittal Form

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: June 3, 2008

SUBJECT: Review of Data
Received for review on May 27, 2008

FROM: Stephen L. Ostrodka, Chief (SRT-4J)
Superfund Field Services Section

TO: Data User: IEPA

We have reviewed the data by CADRE for the following case:

SITE NAME: Chemetco (IL)

CASE NUMBER: 37448 **SDG NUMBER:** ME00C2

Number and Type of Samples: 20 soil samples

Sample Numbers: ME00C2-C9; D0-D9; E0-E1

Laboratory: DataChem **Hrs. for Review:** 20

Following are our findings:

CC: Howard Pham
Region 5 TOPO
Mail Code: SRT-4J

Below is a summary of the out-of-control audits and the possible effects on the data for this case:

Twenty (20) soil samples numbered ME00C2 thru -C9; D0 thru -D9; E0 thru -E1 were collected on May 5-6, 2008. The lab received the samples on May 8, 2008 above the acceptable temperature range. No results were qualified for the temperature divergence. All samples were analyzed for total metals, mercury, and cyanide. All samples were analyzed using the CLP SOW ILM05.4 analysis procedures.

Mercury analysis was performed using a Cold Vapor AA Technique. Cyanide analysis was performed using the MIDI Distillation procedure. The remaining inorganic analyses were performed using an Inductively Coupled Plasma-Atomic Emission Spectroscopy (ICP-AES) procedure.

Samples weights used by the laboratory were frequently rounded incorrectly. Thirteen out of the twenty samples had values reported by the laboratory were rounded incorrectly. The reported results were corrected on samples ME00C3, -C6, -C7, -C8, -C9, -D0, -D1, -D5, -D6, -D7, -D8, -E0, and, -E1.

Reviewed by: Lora Buco/TechLaw, Inc. - ESAT
Date:- June 3, 2008

1. HOLDING TIME:

The inorganic soil samples were reviewed for holding time violations using criteria developed for water samples. No defects were found.

2. CALIBRATIONS:

No defects were found for the calibration or the CRQL (CRI) standards.

3. BLANKS:

The following inorganic samples are associated with an ICB/CCB, preparation blank, or field blank concentration which is greater than the method detection limit (MDL). The sample result is greater than the MDL.

Hits less than the CRQL are qualified "U". The sample result is raised to the CRQL. Hits greater than the CRQL but less than 5 times the blank are qualified "U" and reported at the sample value.

Cadmium
ME00C2, ME00D8

Cobalt
ME00C3, ME00C4, ME00C7, ME00D1, ME00D2, ME00D3, ME00D4, ME00D5, ME00D6, ME00D7, ME00E0, ME00E1

Silver
ME00C2, ME00C3, ME00C4, ME00C5, ME00C6, ME00C7, ME00C8, ME00C9, ME00D0, ME00D1, ME00D2, ME00D3, ME00D4, ME00D5, ME00D6, ME00D7, ME00D8, ME00D9

Sodium
ME00C2, ME00C3, ME00C4, ME00C5, ME00C6, ME00C7, ME00C8, ME00C9, ME00D0, ME00D1, ME00D2, ME00D3, ME00D4, ME00D5, ME00D6, ME00E1

Thallium
ME00C2, ME00C3, ME00C4, ME00C5, ME00C6, ME00C7, ME00C8, ME00C9, ME00D0, ME00D1, ME00D2

The following inorganic samples are associated with a negative ICB/CCB, preparation blank, or field blank concentration whose absolute value is greater than the method detection limit (MDL). The sample result is also greater than the MDL.

Hits less than 5 times the blank are qualified "J-".

Mercury
ME00C3, ME00C5, ME00C6, ME00C7. ME00C8, ME00C9, ME00D0, ME00D1, ME00D2, ME00D3, ME00D4

4. MATRIX SPIKE/MATRIX SPIKE DUPLICATE AND LAB CONTROL SAMPLE:

The following inorganic samples are associated with a matrix spike recovery which is high (>125%) indicating that sample results may be biased high. The required post spike was performed and results were less than or equal to 125%.

Hits are qualified "J"; non-detects are not qualified.

Manganese

ME00C2, ME00C3, ME00C4, ME00C5, ME00C6, ME00C7, ME00C8, ME00C9, ME00D0, ME00D1, ME00D2, ME00D3, ME00D4, ME00D5, ME00D6, ME00D7, ME00D8, ME00D9, ME00E0, ME00E1

Nickel

ME00C2, ME00C3, ME00C4, ME00C5, ME00C6, ME00C7, ME00C8, ME00C9, ME00D0, ME00D1, ME00D2, ME00D3, ME00D4, ME00D5, ME00D6, ME00D7, ME00D8, ME00D9, ME00E0, ME00E1

Thallium

ME00D3, ME00D4, ME00D5, ME00D6, ME00D7, ME00D8, ME00D9, ME00E0, ME00E1

The following inorganic samples are associated with a matrix spike recovery which is low (30-74%) indicating that sample results may be biased low. The required post spike was performed and results were greater than or equal to 75%.

Hits are qualified "J" and non-detects are qualified "UJ".

Antimony

ME00C2, ME00C3, ME00C4, ME00C5, ME00C6, ME00C7, ME00C8, ME00C9, ME00D0, ME00D1, ME00D2, ME00D3, ME00D4, ME00D5, ME00D6, ME00D7, ME00D8, ME00D9, ME00E0, ME00E1

Cyanide

ME00C2, ME00C3, ME00C4, ME00C5, ME00C6, ME00C7, ME00C8, ME00C9, ME00D0, ME00D1, ME00D2, ME00D3, ME00D4, ME00D5, ME00D6, ME00D7, ME00D8, ME00D9, ME00E0, ME00E1

No defects were found for the laboratory control sample.

5. LABORATORY AND FIELD DUPLICATE:

The following inorganic samples are associated with duplicate results which did not meet relative percent difference (RPD) primary criteria.

Hits are qualified "J" and non-detects are qualified "UJ".

Arsenic

ME00C2, ME00C3, ME00C4, ME00C5, ME00C6, ME00C7, ME00C8, ME00C9, ME00D0, ME00D1, ME00D2, ME00D3, ME00D4, ME00D5, ME00D6, ME00D7, ME00D8, ME00D9, ME00E0, ME00E1

Cadmium
ME00C2, ME00C3, ME00C4, ME00C5, ME00C6, ME00C7, ME00C8, ME00C9, ME00D0, ME00D1, ME00D2, ME00D3, ME00D4, ME00D5, ME00D6, ME00D7, ME00D8, ME00D9, ME00E0, ME00E1

Lead
ME00C2, ME00C3, ME00C4, ME00C5, ME00C6, ME00C7, ME00C8, ME00C9, ME00D0, ME00D1, ME00D2, ME00D3, ME00D4, ME00D5, ME00D6, ME00D7, ME00D8, ME00D9, ME00E0, ME00E1

Nickel
ME00C2, ME00C3, ME00C4, ME00C5, ME00C6, ME00C7, ME00C8, ME00C9, ME00D0, ME00D1, ME00D2, ME00D3, ME00D4, ME00D5, ME00D6, ME00D7, ME00D8, ME00D9, ME00E0, ME00E1

Selenium
ME00C2, ME00C3, ME00C4, ME00C5, ME00C6, ME00C7, ME00C8, ME00C9, ME00D0, ME00D1, ME00D2, ME00D3, ME00D4, ME00D5, ME00D6, ME00D7, ME00D8, ME00D9, ME00E0, ME00E1

Thallium
ME00C2, ME00C3, ME00C4, ME00C5, ME00C6, ME00C7, ME00C8, ME00C9, ME00D0, ME00D1, ME00D2, ME00D3, ME00D4, ME00D5, ME00D6, ME00D7, ME00D8, ME00D9, ME00E0, ME00E1

Zinc
ME00C2, ME00C3, ME00C4, ME00C5, ME00C6, ME00C7, ME00C8, ME00C9, ME00D0, ME00D1, ME00D2, ME00D3, ME00D4, ME00D5, ME00D6, ME00D7, ME00D8, ME00D9, ME00E0, ME00E1

No samples were designated as field duplicates.

6. ICP ANALYSIS:

The following inorganic sample results are affected by an interference check "A" sample (ICSA) for which false positive concentration values greater than the MDL were obtained. The sample contains Al, Ca, Fe, or Mg at a level comparable to the ICSA.

Hits less than 10 times the value of the ICSA are qualified "J+"; non-detects are not qualified. Hits greater than 10 times the ICSA are not qualified.

Cadmium
ME00C4

Lead
ME00C2, ME00D8

Selenium
ME00D3, ME00D4, ME00D6, ME00D7, ME00D8, ME00E1

Silver
ME00E1

Thallium
ME00D3, ME00D4, ME00D6, ME00D7, ME00D8

The following inorganic sample results are affected by an interference check "AB" sample (ICSAB) for which concentration values greater than 120% recovery were obtained. The sample contains Al, Ca, Fe, or Mg at a level comparable to the ICSA.
Hits are qualified "J+"; non-detects are not qualified.

Lead
ME00C2, ME00C3, ME00C4, ME00C5, ME00C6, ME00C7, ME00C8, ME00C9, ME00D0, ME00D1, ME00D2, ME00D3, ME00D4, ME00D6, ME00D7, ME00D8, ME00E1

No defects were found for the serial dilution sample.

7. SAMPLE RESULTS:

The following inorganic samples have analyte concentrations reported above the method detection limit (MDL) but below the quantitation limit (CRQL).
Results are qualified "J".

Antimony
ME00E0

Beryllium
ME00D5, ME00D9

Mercury
ME00C3, ME00C5, ME00C6, ME00C7, ME00C8, ME00C9, ME00D0, ME00D1, ME00D2, ME00D3, ME00D4, ME00D6

Selenium
ME00C2, ME00C3, ME00C4, ME00C5, ME00C6, ME00C7, ME00C8, ME00C9, ME00D0, ME00D1, ME00D2, ME00D3, ME00D4, ME00D6, ME00D7, ME00D8, ME00D9

Thallium
ME00D3, ME00D4, ME00D5, ME00D6, ME00D7, ME00D8, ME00D9

All data, except those qualified above, are acceptable.

CADRE ILM05.4 Data Qualifier Sheet

Qualifiers	Data Qualifier Definitions
U	The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control (QC) criteria. The analyte may or may not be present in the sample.
UJ	The analyte was analyzed for, but not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

Reviewed by: Lora Buco/TechLaw, Inc. - ESAT
Date: June 3, 2008

Analytical Results (Qualified Data)

Case #: 37448 SDG : ME00C2
Site CHEMETCO
Lab. DATAC
Reviewer L. Buco
Date : 5/30/2008

Number of Soil Samples : 20
Number of Water Samples : 0

Sample Number	ME00C2		ME00C3		ME00C4		ME00C5		ME00C6	
Sampling Location	X201		X202		X203		X204		X205	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg	
Date Sampled :	5/5/2008		5/5/2008		5/5/2008		5/5/2008		5/5/2008	
Time Sampled :										
%Solids :	60.8		45.1		46.3		49.6		53.0	
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
ANALYTE	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALUMINUM	19500		15700		17100		15100		17600	
ANTIMONY	9.9	UJ	13.4	UJ	13.0	UJ	12.1	UJ	11.3	UJ
ARSENIC	3.9	J	10.8	J	8.8	J	13.0	J	11.0	J
BARIUM	285		356		293		346		354	
BERYLLIUM	1.4		1.2		1.3		1.2		1.3	
CADMIUM	0.82	UJ	3.6	J	2.3	J+	3.6	J	2.4	J
CALCIUM	8550		7820		8520		9040		8730	
CHROMIUM	24.1		24.1		23.4		22.5		23.8	
COBALT	11.2		11.2	U	10.8	U	14.9		10.0	
COPPER	30.1		50.2		36.6		41.2		36.9	
IRON	24500		29500		28900		29800		30100	
LEAD	22.7	J+	91.1	J+	46.0	J+	83.5	J+	61.1	J+
MAGNESIUM	6400		4590		5390		4630		5200	
MANGANESE	367	J	708	J	308	J	1170	J	1410	J
MERCURY	0.16	U	0.057	J-	0.22	U	0.062	J-	0.037	J-
NICKEL	30.9	J	40.5	J	36.4	J	42.1	J	27.2	J
POTASSIUM	3330		2780		2840		2720		3290	
SELENIUM	0.86	J	2.5	J	1.3	J	2.4	J	1.6	J
SILVER	1.6	U	2.2	U	2.2	U	2.0	U	1.9	U
SODIUM	822	U	1120	U	1080	U	1010	U	943	U
THALLIUM	4.1	UJ	5.6	U	5.4	U	5.0	UJ	4.7	UJ
VANADIUM	35.8		37.6		35.2		36.4		32.9	
ZINC	96.7	J	289	J	136	J	288	J	248	J
CYANIDE	4.1	UJ	5.5	UJ	5.4	UJ	5.0	UJ	4.7	UJ

Analytical Results (Qualified Data)

Case #: 37448 SDG : ME00C2
Site : CHEMETCO
Lab. DATAC
Reviewer : L. Buco
Date : 5/30/2008

Sample Number :	ME00C7		ME00C8		ME00C9		ME00D0		ME00D1	
Sampling Location :	X206		X207		X208		X209		X210	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg	
Date Sampled :	5/5/2008		5/5/2008		5/5/2008		5/5/2008		5/5/2008	
Time Sampled :										
%Solids :	49.3		56.5		54.8		48.8		47.9	
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
ANALYTE	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALUMINUM	16900		16000		14300		17900		18500	
ANTIMONY	12.2	UJ	10.5	UJ	10.8	UJ	12.2	UJ	12.4	UJ
ARSENIC	7.9	J	6.0	J	6.7	J	8.7	J	7.9	J
BARIUM	328		240		235		317		306	
BERYLLIUM	1.2		1.1		1.0		1.4		1.3	
CADMIUM	18.2	J	9.0	J	11.2	J	29.9	J	33.2	J
CALCIUM	7710		8360		8750		7830		7350	
CHROMIUM	23.7		22.8		20.7		25.1		25.3	
COBALT	10.1	U	9.9		9.7		13.0		10.3	UJ
COPPER	121		53.4		52.7		118		128	
IRON	24700		24200		24100		25400		24000	
LEAD	76.3	J+	33.7	J+	33.8	J+	69.9	J+	70.9	J+
MAGNESIUM	4810		5910		5560		5000		4970	
MANGANESE	580	J	423	J	454	J	681	J	520	J
MERCURY	0.075	J-	0.029	J-	0.024	J-	0.062	J-	0.093	J-
NICKEL	63.3	J	49.7	J	44.2	J	107	J	73.7	J
POTASSIUM	3030		2730		2620		3110		3200	
SELENIUM	1.5	J	0.73	J	1.1	J	2.4	J	2.1	J
SILVER	2.0	U	1.8	U	1.8	U	2.0	U	2.1	U
SODIUM	1010	U	876	U	903	U	1010	U	1030	U
THALLIUM	5.1	UJ	4.4	UJ	4.5	UJ	5.1	UJ	5.2	UJ
VANADIUM	33.4		32.2		30.2		39.9		34.3	
ZINC	360	J	219	J	224	J	472	J	471	J
CYANIDE	5.1	UJ	4.4	UJ	4.6	UJ	5.1	UJ	5.2	UJ

Analytical Results (Qualified Data)

Case #: 37448 SDG : ME00C2
Site : CHEMETCO
Lab. : DATAC
Reviewer : L. Buco
Date : 5/30/2008

Sample Number :	ME00D2		ME00D3		ME00D4		ME00D5		ME00D6	
Sampling Location :	X211		X212		X213		X214		X215	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg	
Date Sampled :	5/5/2008		5/5/2008		5/5/2008		5/5/2008		5/6/2008	
Time Sampled :										
%Solids :	47.7		53.4		52.8		37.7		44.4	
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
ANALYTE	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALUMINUM	18700		18800		19000		20500		21800	
ANTIMONY	12.6	UJ	11.2	UJ	11.4	UJ	15.9	UJ	13.4	UJ
ARSENIC	8.4	J	8.0	J	8.4	J	12.4	J	5.9	J
BARIUM	319		284		284		318		307	
BERYLLIUM	1.3		1.3		1.3		1.2	J	1.8	
CADMIUM	30.7	J	70.0	J	37.9	J	57.6	J	128	J
CALCIUM	7580		6570		7560		7250		8400	
CHROMIUM	25.7		25.4		26.9		31.3		30.5	
COBALT	10.5	U	9.4	U	9.5	U	13.3	U	11.1	U
COPPER	118		178		138		724		527	
IRON	24200		22300		21700		23700		23800	
LEAD	67.2	J+	91.8	J+	79.4	J+	496	J	339	J+
MAGNESIUM	5030		4750		4840		5150		5350	
MANGANESE	598	J	299	J	217	J	215	J	233	J
MERCURY	0.070	J-	0.11	J-	0.091	J-	0.43		0.18	J
NICKEL	76.2	J	80.1	J	90.6	J	150	J	227	J
POTASSIUM	3260		3210		3440		4010		3960	
SELENIUM	1.9	J	2.4	J+	3.0	J+	17.2	J	5.1	J+
SILVER	2.1	U	1.9	U	1.9	U	2.7	U	2.2	U
SODIUM	1050	U	936	U	947	U	1330	U	1110	U
THALLIUM	5.2	UJ	3.1	J+	3.2	J+	5.5	J	4.5	J+
VANADIUM	35.2		34.6		40.6		44.7		42.2	
ZINC	433	J	653	J	449	J	784	J	1090	J
CYANIDE	5.2	UJ	4.7	UJ	4.7	UJ	6.6	UJ	5.6	UJ

Analytical Results (Qualified Data)

Case #: 37448 SDG : ME00C2
Site : CHEMETCO
Lab. : DATAC
Reviewer : L. Buco
Date : 5/30/2008

Sample Number :	ME00D7		ME00D8		ME00D9		ME00E0		ME00E1	
Sampling Location :	X216		X217		X218		X219		X220	
Matrix :	Soil		Soil		Soil		Soil		Soil	
Units :	mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg	
Date Sampled :	5/6/2008		5/6/2008		5/6/2008		5/6/2008		5/6/2008	
Time Sampled :										
%Solids :	50 4		66.9		77.3		28.5		33.2	
Dilution Factor :	1.0		1.0		1.0		1.0		1.0	
ANALYTE	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALUMINUM	22800		14100		9930		24900		27100	
ANTIMONY	11.9	UJ	9.1	UJ	7.8	UJ	17.5	J	21.4	J
ARSENIC	8.5	J	8.0	J	8.4	J	11.3	J	20.6	J
BARIUM	353		159		197		574		593	
BERYLLIUM	2.1		1.0		0.64	J	3.7		4.3	
CADMIUM	108	J	0.75	UJ	1.5	J	715	J	3760	J
CALCIUM	6570		4260		2640		12600		24400	
CHROMIUM	31.8		19.0		13.9		66.3		43	
COBALT	9.9	U	9.7		6.8		17.4	U	15.2	U
COPPER	971		25.0		78.4		10600		5870	
IRON	25100		24100		12100		26200		32500	
LEAD	448	J+	19.5	J+	69.1	J	5700	J	9410	J+
MAGNESIUM	5850		4790		2550		5630		5720	
MANGANESE	303	J	479	J	446	J	247	J	1090	J
MERCURY	0.27		0.15	U	0.13	U	3.9		5.1	
NICKEL	192	J	32.9	J	28.5	J	444	J	301	J
POTASSIUM	4290		2240		2470		4430		4000	
SELENIUM	3.0	J+	0.86	J+	1.1	J	44.5	J	57.7	J+
SILVER	2	U	1.5	U	1.3	U	21.4		12.3	J+
SODIUM	1210		1570		1150		2080		1520	U
THALLIUM	4.3	J+	1.8	J+	1.1	J	20.0	J	82.5	J
VANADIUM	41.7		31.4		22.7		54.1		54.6	
ZINC	1240	J	82.6	J	218	J	4970	J	18500	J
CYANIDE	5.0	UJ	3.7	UJ	3.2	UJ	8.8	UJ	7.5	UJ

USEPA Contract Laboratory Program
Inorganic Traffic Report & Chain of Custody Record

8129024

Case No: 37448
DAS No:
SDG No: ME00C2

L

Date Shipped:	5/7/2008
Carrier Name:	UPS
Airbill:	1Z6215892210027229
Shipped to:	DataChem Laboratories, Inc. 960 West LeVoy Drive Salt Lake City UT 84123 (801) 266-7700

Chain of Custody Record

Sampler Signature:

Relinquished By	(Date / Time)	Received By	(Date / Time)
1	5/7/08 1200		5/8/08 1115
2			
3			
4			

For Lab Use Only

Lab Contract No: EPA06054
Unit Price: n/a
Transfer To:
Lab Contract No:
Unit Price:

INORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	ORGANIC SAMPLE No.	FOR LAB USE ONLY Sample Condition On Receipt
ME00C2	Soil/Sediment/ Jerry Willman	L/G	ICP, Hg,CN (21)	5-100358 (Ice Only) (1)	X201	S: 5/5/2008 11:00		
ME00C3	Soil/Sediment/ Jerry Willman	L/G	ICP, Hg,CN (21)	5-139324 (Ice Only) (1)	X202	S: 5/5/2008 11:10		
ME00C4	Soil/Sediment/ Jerry Willman	L/G	ICP, Hg,CN (21)	5-139325 (Ice Only) (1)	X203	S: 5/5/2008 11:30		
ME00C5	Soil/Sediment/ Jerry Willman	L/G	ICP, Hg,CN (21)	5-139326 (Ice Only) (1)	X204	S: 5/5/2008 11:50		
ME00C6	Soil/Sediment/ Jerry Willman	L/G	ICP, Hg,CN (21)	5-139327 (Ice Only) (1)	X205	S: 5/5/2008 12:00		
ME00C7	Soil/Sediment/ Jerry Willman	L/G	ICP, Hg,CN (21)	5-139328 (Ice Only) (1)	X206	S: 5/5/2008 12:40		
ME00C8	Soil/Sediment/ Jerry Willman	L/G	ICP, Hg,CN (21)	5-139329 (Ice Only) (1)	X207	S: 5/5/2008 12:50		
ME00C9	Soil/Sediment/ Jerry Willman	L/G	ICP, Hg,CN (21)	5-139330 (Ice Only) (1)	X208	S: 5/5/2008 13:05		
ME00D0	Soil/Sediment/ Jerry Willman	L/G	ICP, Hg,CN (21)	5-139331 (Ice Only) (1)	X209	S: 5/5/2008 13:25		
ME00D1	Soil/Sediment/ Jerry Willman	L/G	ICP, Hg,CN (21)	5-139332 (Ice Only) (1)	X210	S: 5/5/2008 13:40		

5/8/08

Shipment for Case Complete?N	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Cooler Temperature Upon Receipt: 8°	Chain of Custody Seal Number: 89336
Analysis Key:	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G		Custody Seal Intact? Y / Shipment Iced? YES

ICP, Hg,CN = CLP ICP Metals, Hg, CN

TR Number: 5-162075208-050708-0002

LABORATORY COPY

TR provides preliminary results. Requests for preliminary results will increase analytical costs.
Send Copy to: Sample Management Office, Attn: Heather Bauer, CSC, 15000 Conference Center Dr., Chantilly, VA 20151-3819; Phone 703/818-4200; Fax 703/818-4602

USEPA Contract Laboratory Program
Inorganic Traffic Report & Chain of Custody Record

Case No: 37448
DAS No:
SDG No: ME00D2

L

Date Shipped:	5/7/2008
Carrier Name:	UPS
Airbill:	1Z6215892210027229
Shipped to:	DataChem Laboratories, Inc. 960 West LeVoy Drive Salt Lake City UT 84123 (801) 266-7700

Chain of Custody Record

Relinquished By	(Date / Time)	Received By	(Date / Time)
1 [illegible]	5/7/08 1200	[illegible]	5/8/08 [illegible]
2			
3			
4			

Sampler Signature: [illegible]

For Lab Use Only

Lab Contract No: EPW06054
Unit Price: n/a
Transfer To:
Lab Contract No:
Unit Price:

INORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	ORGANIC SAMPLE No.	FOR LAB USE ONLY Sample Condition On Receipt
ME00D2	Soil/Sediment/ Jerry Willman	L/G	ICP, Hg,CN (21)	5-139333 (Ice Only) (1)	X211	S: 5/5/2008 13:40		
ME00D3	Soil/Sediment/ Jerry Willman	L/G	ICP, Hg,CN (21)	5-139334 (Ice Only) (1)	X212	S: 5/5/2008 14:05		
ME00D4	Soil/Sediment/ Jerry Willman	L/G	ICP, Hg,CN (21)	5-139335 (Ice Only) (1)	X213	S: 5/5/2008 14:30		
ME00D5	Soil/Sediment/ Jerry Willman	L/G	ICP, Hg,CN (21)	5-139336 (Ice Only) (1)	X214	S: 5/5/2008 16:20		
ME00D6	Soil/Sediment/ Jerry Willman	L/G	ICP, Hg,CN (21)	5-139337 (Ice Only) (1)	X215	S: 5/6/2008 8:00		
ME00D7	Soil/Sediment/ Jerry Willman	L/G	ICP, Hg,CN (21)	5-139338 (Ice Only) (1)	X216	S: 5/6/2008 8:20		
ME00D8	Soil/Sediment/ Jerry Willman	L/G	ICP, Hg,CN (21)	5-139339 (Ice Only) (1)	X217	S: 5/6/2008 8:35		
ME00D9	Soil/Sediment/ Jerry Willman	L/G	ICP, Hg,CN (21)	5-139340 (Ice Only) (1)	X218	S: 5/6/2008 8:45		
ME00E0	Soil/Sediment/ Jerry Willman	L/G	ICP, Hg,CN (21)	5-139341 (Ice Only) (1)	X219	S: 5/6/2008 9:40		
ME00E1	Soil/Sediment/ Jerry Willman	L/G	ICP, Hg,CN (21)	5-303510 (Ice Only) (1)	X220	S: 5/6/2008 10:00		

Shipment for Case Complete?N	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Cooler Temperature Upon Receipt: 8	Chain of Custody Seal Number: 89336
Analysis Key:	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Custody Seal Intact? A	Shipment Iced? YES

ICP, Hg,CN = CLP ICP Metals, Hg, CN

TR Number: 5-162075208-050708-0002

LABORATORY COPY

CR provides preliminary results. Requests for preliminary results will increase analytical costs.
Send Copy to: Sample Management Office, Attn: Heather Bauer, CSC, 15000 Conference Center Dr., Chantilly, VA 20151-3819; Phone 703/818-4200; Fax 703/818-4602

MAY 2 7 2008

DATA CHEM LABORATORIES, INC.

SDG Administrative Narrative

Contract: EP-W-06-054

Case: 37448

SDG: MEQQC2

Set ID No.: _____

Cooler # and temperatures of each (upon receipt)

Cooler Number C08- NA Arrival temperature was 8 °C

Cooler Number C08-_____ Arrival temperature was _____ °C

Cooler Number C08-_____ Arrival temperature was _____ °C

Cooler Number C08-_____ Arrival temperature was _____ °C

Cooler Number C08-_____ Arrival temperature was _____ °C

Cooler Number C08-_____ Arrival temperature was _____ °C

Cooler Number C08-_____ Arrival temperature was _____ °C

Cooler Number C08-_____ Arrival temperature was _____ °C

Cooler Number C08-_____ Arrival temperature was _____ °C

5/23/08

Communications:

Any sample receiving issues with this SDG are fully documented through the email communications which are included as a portion of this SDG Narrative and immediately follow this page. Copies of each of these email communications are also located in the communication section of this datapackage. In addition, any analytical issues pertinent to a given fraction are fully documented by the analyst in the associated narrative for the applicable fraction.

Comments:

None.

Signature: _____ Date: 5/23/08

DATA CHEM LABORATORIES, INC.

SDG NARRATIVE

Case #: 37448
SDG#: ME00C2
Contract #: EP-W-06-054
DCL Set ID#: 8129024
May 22, 2008

General Information

The twenty samples in this SDG were analyzed by methodologies contained in ILM05.4. All concentration, analytical, and method qualifiers are defined in the SOW.

Holding Times

All samples were prepared and analyzed within method required holding times.

Initial and Continuing Calibration

All initial and continuing calibration verification and blank analyses were performed within the designated frequency and recoveries of the verifications and concentrations of the blanks met method acceptance criteria.

Interference Check Sample Analysis

Results for the interference check samples met method acceptance criteria.

Preparation Blanks

The absolute values of all analyte concentrations in the preparation blanks were lower than the Contract Required Quantitation Limits.

Laboratory Control Sample Analysis

Results for the analysis of the LCS met method acceptance criteria.

Matrix Spike Analysis

All matrix spike recoveries were within the limits of 75-125% with the exceptions of antimony, manganese, nickel, thallium and cyanide.

Matrix Duplicate Analysis

All matrix duplicate results met method criteria with the exceptions of arsenic, barium, cadmium, copper, lead, manganese, nickel, selenium, silver, thallium and zinc.

Serial Dilution

ICP-AES Serial Dilution results met method acceptance criteria.

Miscellaneous Comments

All calibration data is linear, please see raw data.
Cooler temps were at 8°C at time of receipt.

Issues – The TR/COC did not designate laboratory QC, we selected sample ME00E1 for this SDG.

Example Equations

960 West LeVoy Drive • Salt Lake City, Utah 84123-2502 • (800) 356-9135 • (801) 266-7700 • Fax (801) 268-9992
www.datachem.com

Method HS1: $C \times DF \times \frac{Vf}{Wi} \div S = Concentration(\mu g/g) = Concentration\ (mg/Kg)$

Method CS1: $C \times DF \times \frac{Vf}{Wi} \div S = Concentration(\mu g/g) = Concentration\ (mg/Kg)$

Method DS2: $C \times DF \times \frac{Vf}{Wi} \div S = Concentration(\mu g/g) = Concentration\ (mg/Kg)$

C = Instrument value in µg/L (The average of all replicate integrations).
Vf = Final digestion volume (L)
Wi = Initial digestion Weight (g)
DF = Dilution Factor
S = % Solids/100

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COVER PAGE

Lab Name: DATACHEM LABORATORIES Contract: EP-W-06-054

Lab Code: DATAC Case No.: 37448 NRAS No.: _____ SDG No.: ME00C2

SOW No.: ILM05.4

EPA Sample No.	Lab Sample ID
ME00C2	8129024001
ME00C3	8129024002
ME00C4	8129024003
ME00C5	8129024004
ME00C6	8129024005
ME00C7	8129024006
ME00C8	8129024007
ME00C9	8129024008
ME00D0	8129024009
ME00D1	8129024010
ME00D2	8129024011
ME00D3	8129024012
ME00D4	8129024013
ME00D5	8129024014
ME00D6	8129024015
ME00D7	8129024016
ME00D8	8129024017
ME00D9	8129024018
ME00E0	8129024019
ME00E1	8129024020
ME00E1D	8129024022
ME00E1S	8129024021

		ICP-AES	ICP-MS
Were ICP-AES and ICP-MS Interelement corrections applied?	(Yes/No)	YES	NO
Were ICP-AES and ICP-MS background corrections applied?	(Yes/No)	YES	NO
If yes - were raw data generated before application of background corrections?	(Yes/No)	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 (or via an alternate means of electronic transmission, if approved in advance by USEPA) has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: _____ Name: Neil Edwards

Date: 05/20/2008 Title: Chemist

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3-IN
BLANKS

Lab Name: DATACHEM LABORATORIES Contract: EP-W-06-054

Lab Code: DATAC Case No.: 37448 NRAS No.: _____ SDG No.: ME00C2

Preparation Blank Matrix (soil/water): SOIL

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

	Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank		
Analyte		C	1	C	2	C	3	C		C	M
Aluminum	200.000	U	32.788	J	52.223	J	200.000	U	7.654	J	P
Antimony	60.000	U	60.000	U	60.000	U	60.000	U	6.000	U	P
Arsenic	10.000	U	10.000	U	10.000	U	10.000	U	-0.255	J	P
Barium	200.000	U	0.972	J	0.958	J	200.000	U	20.000	U	P
Beryllium	5.000	U	0.168	J	5.000	U	5.000	U	0.500	U	P
Cadmium	0.089	J	0.171	J	0.235	J	0.232	J	0.500	U	P
Calcium	5000.000	U	32.317	J	9.172	J	12.952	J	15.366	J	P
Chromium	10.000	U	10.000	U	10.000	U	0.745	J	1.000	U	P
Cobalt	50.000	U	0.672	J	0.583	J	0.674	J	5.000	U	P
Copper	25.000	U	25.000	U	25.000	U	25.000	U	2.500	U	P
Iron	100.000	U	13.151	J	20.075	J	100.000	U	10.000	U	P
Lead	10.000	U	10.000	U	1.607	J	10.000	U	1.000	U	P
Magnesium	5000.000	U	27.755	J	5000.000	U	5000.000	U	500.000	U	P
Manganese	15.000	U	0.961	J	1.275	J	0.431	J	1.500	U	P
Mercury	-0.031	J	-0.031	J	-0.024	J	-0.033	J	-0.017	J	CV
Nickel	40.000	U	40.000	U	40.000	U	40.000	U	4.000	U	P
Potassium	5000.000	U	5000.000	U	5000.000	U	5000.000	U	500.000	U	P
Selenium	35.000	U	35.000	U	35.000	U	35.000	U	3.500	U	P
Silver	0.579	J	1.627	J	-1.688	J	-2.048	J	-0.113	J	P
Sodium	5000.000	U	5000.000	U	5000.000	U	5000.000	U	6.682	J	P
Thallium	25.000	U	25.000	U	0.873	J	25.000	U	2.500	U	P
Vanadium	50.000	U	0.782	J	1.494	J	1.191	J	5.000	U	P
Zinc	60.000	U	60.000	U	60.000	U	60.000	U	6.000	U	P
Cyanide	10.000	U	-1.858	J	10.000	U	10.000	U	2.500	U	AS

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3-IN
BLANKS

Lab Name: DATACHEM LABORATORIES Contract: EP-W-06-054

Lab Code: DATAC Case No.: 37448 NRAS No.: _____ SDG No.: ME00C2

Preparation Blank Matrix (soil/water): SOIL

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

Analyte	Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank		
		C	1	C	2	C	3	C		C	M
Aluminum			200.000	U	200.000	U	27.738	J			P
Antimony			60.000	U	60.000	U	60.000	U			P
Arsenic			10.000	U	10.000	U	10.000	U			P
Barium			200.000	U	200.000	U	200.000	U			P
Beryllium			5.000	U	5.000	U	5.000	U			P
Cadmium			0.802	J	0.153	J	0.174	J			P
Calcium			5000.000	U	5000.000	U	8.130	J			P
Chromium			0.778	J	10.000	U	10.000	U			P
Cobalt			0.856	J	0.709	J	0.483	J			P
Copper			25.000	U	25.000	U	25.000	U			P
Iron			100.000	U	100.000	U	100.000	U			P
Lead			2.659	J	10.000	U	10.000	U			P
Magnesium			5000.000	U	5000.000	U	5000.000	U			P
Manganese			15.000	U	15.000	U	0.508	J			P
Mercury			-0.029	J							CV
Nickel			40.000	U	40.000	U	40.000	U			P
Potassium			5000.000	U	5000.000	U	5000.000	U			P
Selenium			35.000	U	35.000	U	35.000	U			P
Silver			-4.632	J	-3.462	J					P
Sodium			5000.000	U	5000.000	U	5000.000	U			P
Thallium			25.000	U	0.801	J	1.887	J			P
Vanadium			0.566	J	50.000	U	0.615	J			P
Zinc			3.863	J	60.000	U	60.000	U			P
Cyanide			10.000	U	1.614	J					AS

USEPA - CLP

4A-IN
ICP-AES INTERFERENCE CHECK SAMPLE

Lab Name: DATACHEM LABORATORIES Contract: EP-W-06-054

Lab Code: DATAC Case No.: 37448 NRAS No.: _____ SDG No.: ME00C2

ICP-AES Instrument ID: ICP07 ICS Source: EPA(1206)

Concentration Units: ug/L

Analyte	True		Initial Found				Final Found			
	Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R	Sol. A	%R	Sol. AB	%R
Aluminum	244000		251000	103			260000	107		
Antimony	0.0		-0.49				-3.7			
Arsenic	0.0		1.5				-0.40			
Barium	2.0		2.6	130			2.9	145		
Beryllium	0.0		0.43				0.52			
Cadmium	0.0		1.2				0.77			
Calcium	235000		245000	104			260000	111		
Chromium	43.0		48.3	112			48.7	113		
Cobalt	4.0		3.0	75			2.9	73		
Copper	23.0		25.4	110			25.3	110		
Iron	95600		97700	102			103000	108		
Lead	10.0		23.5	235			22.8	228		
Magnesium	248000		264000	107			279000	113		
Manganese	19.0		20.1	106			21.1	111		
Nickel	21.0		24.2	115			23.8	113		
Potassium	0.0		-25.7				-31.9			
Selenium	0.0		1.3				2.5			
Silver										
Sodium	0.0		824				849			
Thallium	0.0		6.9				5.4			
Vanadium	0.0		-9.9				-9.3			
Zinc	28.0		33.5	120			35.0	125		

USEPA - CLP

4A-IN
ICP-AES INTERFERENCE CHECK SAMPLE

Lab Name: DATACHEM LABORATORIES Contract: EP-W-06-054

Lab Code: DATAC Case No.: 37448 NRAS No.: _____ SDG No.: ME00C2

ICP-AES Instrument ID: ICP07 ICS Source: EPA(0203)

Concentration Units: ug/L

	True		Initial Found				Final Found			
Analyte	Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R	Sol. A	%R	Sol. AB	%R
Aluminum		241000			255000	106			259000	107
Antimony		589			679	115			692	117
Arsenic		101			112	111			114	113
Barium		495			521	105			533	108
Beryllium		475			507	107			521	110
Cadmium		940			1060	113			1090	116
Calcium		231000			246000	106			258000	112
Chromium		511			591	116			595	116
Cobalt		461			530	115			537	116
Copper		548			556	101			564	103
Iron		94800			98000	103			102000	108
Lead		61.0			72.8	119			76.9	126
Magnesium		251000			263000	105			277000	110
Manganese		502			528	105			544	108
Nickel		984			1090	111			1110	113
Potassium		0.0			-18.1				-18.9	
Selenium		53.0			59.7	113			60.7	115
Silver										
Sodium		0.0			833				856	
Thallium		103			111	108			112	109
Vanadium		494			490	99			514	104
Zinc		1030			1090	106			1120	109

USEPA - CLP

4A-IN
ICP-AES INTERFERENCE CHECK SAMPLE

Lab Name: DATACHEM LABORATORIES Contract: EP-W-06-054

Lab Code: DATAC Case No.: 37448 NRAS No.: _____ SDG No.: ME00C2

ICP-AES Instrument ID: ICP07 ICS Source: EPA(1206)

Concentration Units: ug/L

Analyte	True		Initial Found				Final Found			
	Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R	Sol. A	%R	Sol. AB	%R
Aluminum	244000						252000	103		
Antimony	0.0						-2.6			
Arsenic	0.0						-0.093			
Barium	2.0						2.5	125		
Beryllium	0.0						0.45			
Cadmium	0.0						1.4			
Calcium	235000						246000	105		
Chromium	43.0						49.0	114		
Cobalt	4.0						2.8	70		
Copper	23.0						25.3	110		
Iron	95600						98000	103		
Lead	10.0						21.4	214		
Magnesium	248000						264000	107		
Manganese	19.0						20.2	106		
Nickel	21.0						23.8	113		
Potassium	0.0						-30.1			
Selenium	0.0						2.9			
Silver										
Sodium	0.0						840			
Thallium	0.0						5.7			
Vanadium	0.0						-10.1			
Zinc	28.0						34.8	124		

USEPA - CLP

4A-IN
ICP-AES INTERFERENCE CHECK SAMPLE

Lab Name: DATACHEM LABORATORIES Contract: EP-W-06-054

Lab Code: DATAC Case No.: 37448 NRAS No.: _____ SDG No.: ME00C2

ICP-AES Instrument ID: ICP07 ICS Source: EPA(0203)

Concentration Units: ug/L

Analyte	True		Initial Found				Final Found			
	Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R	Sol. A	%R	Sol. AB	%R
Aluminum		241000							256000	106
Antimony		589							683	116
Arsenic		101							112	111
Barium		495							528	107
Beryllium		475							511	108
Cadmium		940							1070	114
Calcium		231000							248000	107
Chromium		511							597	117
Cobalt		461							532	115
Copper		548							562	103
Iron		94800							99000	104
Lead		61.0							76.6	126
Magnesium		251000							266000	106
Manganese		502							532	106
Nickel		984							1090	111
Potassium		0.0							12.8	
Selenium		53.0							61.7	116
Silver										
Sodium		0.0							852	
Thallium		103							111	108
Vanadium		494							497	101
Zinc		1030							1090	106

USEPA - CLP

4A-IN
ICP-AES INTERFERENCE CHECK SAMPLE

Lab Name: DATACHEM LABORATORIES Contract: EP-W-06-054

Lab Code: DATAC Case No.: 37448 NRAS No.: _____ SDG No.: ME00C2

ICP-AES Instrument ID: ICP07 ICS Source: EPA(1206)

Concentration Units: ug/L

Analyte	True		Initial Found				Final Found			
	Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R	Sol. A	%R	Sol. AB	%R
Aluminum	244000						249000	102		
Antimony	0.0						-1.6			
Arsenic	0.0						-1.3			
Barium	2.0						2.4	120		
Beryllium	0.0						0.40			
Cadmium	0.0						1.1			
Calcium	235000						245000	104		
Chromium	43.0						48.6	113		
Cobalt	4.0						3.2	80		
Copper	23.0						25.5	111		
Iron	95600						97500	102		
Lead	10.0						19.5	195		
Magnesium	248000						263000	106		
Manganese	19.0						20.1	106		
Nickel	21.0						23.5	112		
Potassium	0.0						0.80			
Selenium	0.0						1.6			
Silver										
Sodium	0.0						822			
Thallium	0.0						6.9			
Vanadium	0.0						-9.4			
Zinc	28.0						33.7	120		

USEPA - CLP

4A-IN
ICP-AES INTERFERENCE CHECK SAMPLE

Lab Name: DATACHEM LABORATORIES Contract: EP-W-06-054

Lab Code: DATAC Case No.: 37448 NRAS No.: _____ SDG No.: ME00C2

ICP-AES Instrument ID: ICP07 ICS Source: EPA(0203)

Concentration Units: ug/L

Analyte	True		Initial Found				Final Found			
	Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R	Sol. A	%R	Sol. AB	%R
Aluminum		241000							254000	105
Antimony		589							677	115
Arsenic		101							111	110
Barium		495							519	105
Beryllium		475							507	107
Cadmium		940							1060	113
Calcium		231000							246000	106
Chromium		511							593	116
Cobalt		461							528	115
Copper		548							556	101
Iron		94800							98400	104
Lead		61.0							75.6	124
Magnesium		251000							264000	105
Manganese		502							529	105
Nickel		984							1080	110
Potassium		0.0							9.1	
Selenium		53.0							62.3	118
Silver										
Sodium		0.0							841	
Thallium		103							110	107
Vanadium		494							488	99
Zinc		1030							1090	106

USEPA - CLP

4A-IN
ICP-AES INTERFERENCE CHECK SAMPLE

Lab Name: DATACHEM LABORATORIES Contract: EP-W-06-054

Lab Code: DATAC Case No.: 37448 NRAS No.: _____ SDG No.: ME00C2

ICP-AES Instrument ID: ICP07 ICS Source: EPA(1206)

Concentration Units: ug/L

Analyte	True		Initial Found				Final Found			
	Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R	Sol. A	%R	Sol. AB	%R
Aluminum	244000		249000	102			247000	101		
Antimony										
Arsenic										
Barium										
Beryllium										
Cadmium										
Calcium	235000		240000	102			233000	99		
Chromium										
Cobalt										
Copper										
Iron	95600		96400	101			94900	99		
Lead										
Magnesium	248000		257000	104			250000	101		
Manganese										
Nickel										
Potassium										
Selenium										
Silver	0.0		13.3				10.8			
Sodium										
Thallium										
Vanadium										
Zinc										

USEPA - CLP

4A-IN
ICP-AES INTERFERENCE CHECK SAMPLE

Lab Name: DATACHEM LABORATORIES Contract: EP-W-06-054

Lab Code: DATAC Case No.: 37448 NRAS No.: _____ SDG No.: ME00C2

ICP-AES Instrument ID: ICP07 ICS Source: EPA(0203)

Concentration Units: ug/L

Analyte	True		Initial Found				Final Found			
	Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R	Sol. A	%R	Sol. AB	%R
Aluminum		241000			254000	105			251000	104
Antimony										
Arsenic										
Barium										
Beryllium										
Cadmium										
Calcium		231000			243000	105			238000	103
Chromium										
Cobalt										
Copper										
Iron		94800			98000	103			96700	102
Lead										
Magnesium		251000			261000	104			255000	102
Manganese										
Nickel										
Potassium										
Selenium										
Silver		206			230	112			230	112
Sodium										
Thallium										
Vanadium										
Zinc										

USEPA - CLP

4A-IN
ICP-AES INTERFERENCE CHECK SAMPLE

Lab Name: DATACHEM LABORATORIES Contract: EP-W-06-054

Lab Code: DATAC Case No.: 37448 NRAS No.: _____ SDG No.: ME00C2

ICP-AES Instrument ID: ICP07 ICS Source: EPA(1206)

Concentration Units: ug/L

Analyte	True		Initial Found				Final Found			
	Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R	Sol. A	%R	Sol. AB	%R
Aluminum	244000						246000	101		
Antimony										
Arsenic										
Barium										
Beryllium										
Cadmium										
Calcium	235000						229000	97		
Chromium										
Cobalt										
Copper										
Iron	95600						93800	98		
Lead										
Magnesium	248000						246000	99		
Manganese										
Nickel										
Potassium										
Selenium										
Silver	0.0						8.7			
Sodium										
Thallium										
Vanadium										
Zinc										

USEPA - CLP

4A-IN
ICP-AES INTERFERENCE CHECK SAMPLE

Lab Name: DATACHEM LABORATORIES Contract: EP-W-06-054

Lab Code: DATAC Case No.: 37448 NRAS No.: _____ SDG No.: ME00C2

ICP-AES Instrument ID: ICP07 ICS Source: EPA(0203)

Concentration Units: ug/L

Analyte	True		Initial Found				Final Found			
	Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R	Sol. A	%R	Sol. AB	%R
Aluminum		241000							249000	103
Antimony										
Arsenic										
Barium										
Beryllium										
Cadmium										
Calcium		231000							230000	100
Chromium										
Cobalt										
Copper										
Iron		94800							94800	100
Lead										
Magnesium		251000							248000	99
Manganese										
Nickel										
Potassium										
Selenium										
Silver		206							228	111
Sodium										
Thallium										
Vanadium										
Zinc										

USEPA - CLP

5A-IN
MATRIX SPIKE SAMPLE RECOVERY

EPA Sample No.

ME00E1S

Lab Name: DATACHEM LABORATORIES Contract: EP-W-06-054

Lab Code: DATAC Case No.: 37448 NRAS No.: _____ SDG No.: ME00C2

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

% Solids for Sample: 33.2

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	39.9900		21.1367		60.24	31	N	P
Arsenic	75-125	46.6807		20.3746		24.10	109		P
Barium	75-125	1927.1486		587.5100		1204.82	111		P
Beryllium	75-125	34.0261		4.2167		30.12	99		P
Cadmium		4802.6104		3718.2731		30.12	3600		P
Calcium									NR
Chromium	75-125	171.2269		42.5572		120.48	107		P
Cobalt	75-125	324.6185		10.3389	J	301.20	104		P
Copper		6167.8715		5814.4578		150.60	235		P
Iron									NR
Lead		9752.9117		9317.4699		12.05	3614		P
Magnesium									NR
Manganese	75-125	1500.5020		1081.9478		301.20	139	N	P
Mercury	75-125	6.9640		5.3333		1.51	108		CV
Nickel	75-125	744.8193		297.6867		301.20	148	N	P
Potassium									NR
Selenium	75-125	92.8695		57.1265		30.12	119		P
Silver	75-125	42.8404		12.1305		30.12	102		P
Sodium									NR
Thallium	75-125	136.1345		81.7098		30.12	181	N	P
Vanadium	75-125	341.6566		54.0723		301.20	95		P
Zinc		21924.7991		18305.7229		301.20	1202		P
Cyanide	75-125	7.5301	U	7.5301	U	15.06	0	N	AS

Comments:

USEPA - CLP

5B-IN

POST-DIGESTION SPIKE SAMPLE RECOVERY

EPA Sample No.

ME00E1A

Lab Name: DATACHEM LABORATORIES Contract: EP-W-06-054

Lab Code: DATAC Case No.: 37448 NRAS No.: _____ SDG No.: ME00C2

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

% Solids for Sample: 33.2

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

Analyte	Control Limit %R	Spiked Sample Result (SSR)	C	Sample Result (SR)	C	Spike Added (SA)	%R	Q	M
Aluminum									NR
Antimony		201.10		70.17		140.40	93		P
Arsenic									NR
Barium									NR
Beryllium									NR
Cadmium									NR
Calcium									NR
Chromium									NR
Cobalt									NR
Copper									NR
Iron									NR
Lead									NR
Magnesium									NR
Manganese		10016.00		3592.07		7180.00	89		P
Mercury									NR
Nickel		2784.27		988.32		1980.00	91		P
Potassium									NR
Selenium									NR
Silver									NR
Sodium									NR
Thallium		769.90		271.28		543.00	92		P
Vanadium									NR
Zinc									NR
Cyanide		157.69		50.00	U	100.00	158		AS

Comments:

USEPA - CLP

6-IN
DUPLICATES

EPA Sample No.

ME00E1D 220

Lab Name: DATACHEM LABORATORIES Contract: EP-W-06-054

Lab Code: DATAC Case No.: 37448 NRAS No.: _____ SDG No.: ME00C2

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

% Solids for Sample: 33.2 % Solids for Duplicate: 33.0

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

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	M
Aluminum		26853.9157		26916.9679		0		P
Antimony	18.072	21.1367		34.3112		48		P
Arsenic		20.3746		30.7023		40	*	P
Barium		587.5100		821.6064		33	*	P
Beryllium	1.506	4.2167		4.9721		16		P
Cadmium		3718.2731		8172.0381		75	*	P
Calcium		24117.9719		23887.8514		1		P
Chromium		42.5572		46.2148		8		P
Cobalt		10.3389	J	13.3386	J	25		P
Copper		5814.4578		7818.5743		29	*	P
Iron		32207.8313		32018.0723		1		P
Lead		9317.4699		14309.4377		42	*	P
Magnesium	1506.024	5658.1325		5617.9719		1		P
Manganese		1081.9478		819.7691		28	*	P
Mercury		5.3333		5.7949		8		CV
Nickel		297.6867		623.1526		71	*	P
Potassium	1506.024	3964.7590		3970.0803		0		P
Selenium		57.1265		92.8916		48	*	P
Silver	3.012	12.1305		15.9630		27	*	P
Sodium		1016.8876	J	1042.5201	J	2		P
Thallium		81.7098		183.1888		77	*	P
Vanadium	15.060	54.0723		53.2118		2		P
Zinc		18305.7229		35864.4578		65	*	P
Cyanide		7.5301	U	7.5301	U			AS

USEPA - CLP

8-IN

ICP-AES and ICP-MS SERIAL DILUTIONS

EPA Sample No.

ME00E1L

Lab Name: DATACHEM LABORATORIES Contract: EP-W-06-054

Lab Code: DATAC Case No.: 37448 NRAS No.: _____ SDG No.: ME00C2

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

Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Aluminum	89155.00		89700.00		1		P
Antimony	70.17		64.99	J	7		P
Arsenic	67.64		67.84		0		P
Barium	1950.53		1987.85		2		P
Beryllium	14.00		14.24	J	2		P
Cadmium	6172.33		6098.50		1		P
Calcium	80071.67		83765.00		5		P
Chromium	141.29		134.51		5		P
Cobalt	34.33	J	33.57	J	2		P
Copper	19304.00		19230.67		0		P
Iron	106930.00		113281.67		6		P
Lead	30934.00		30475.17		1		P
Magnesium	18785.00		19535.00	J	4		P
Manganese	3592.07		3728.88		4		P
Nickel	988.32		976.57		1		P
Potassium	13163.00		13088.83	J	1		P
Selenium	189.66		181.98		4		P
Silver	40.27		36.81	J	9		P
Sodium	3376.07	J	3374.08	J	0		P
Thallium	271.28		271.65		0		P
Vanadium	179.52		185.54	J	3		P
Zinc	12155.00		12177.50		0		P

USEPA - CLP

9-IN
METHOD DETECTION LIMITS (ANNUALLY)

Lab Name: DATACHEM LABORATORIES Contract: EP-W-06-054

Lab Code: DATAC Case No.: 37448 NRAS No.: _____ SDG No.: ME00C2

Instrument Type: CV Instrument ID: AACV01 Date: 01/11/2008

Preparation Method: CS1

Concentration Units (ug/L or mg/kg): mg/kg

Analyte	Wavelength /Mass	CRQL	MDL
Aluminum			
Antimony			
Arsenic			
Barium			
Beryllium			
Cadmium			
Calcium			
Chromium			
Cobalt			
Copper			
Iron			
Lead			
Magnesium			
Manganese			
Mercury	253.70	0.1	0.012
Nickel			
Potassium			
Selenium			
Silver			
Sodium			
Thallium			
Vanadium			
Zinc			
Cyanide			

Comments:

USEPA - CLP

9-IN
METHOD DETECTION LIMITS (ANNUALLY)

Lab Name: DATACHEM LABORATORIES Contract: EP-W-06-054

Lab Code: DATAC Case No.: 37448 NRAS No.: _____ SDG No.: ME00C2

Instrument Type: P Instrument ID: ICP07 Date: 01/12/2008

Preparation Method: NP1

Concentration Units (ug/L or mg/kg): ug/L

Analyte	Wavelength /Mass	CRQL	MDL
Aluminum	308.22	200	20.0
Antimony	206.83	60	1.8
Arsenic	189.04	10	1.5
Barium	455.40	200	0.33
Beryllium	313.11	5.0	0.089
Cadmium	214.44	5.0	0.084
Calcium	317.93	5000	5.9
Chromium	205.55	10	0.73
Cobalt	228.62	50	0.32
Copper	324.75	25	2.6
Iron	259.94	100	9.0
Lead	220.35	10	0.94
Magnesium	279.08	5000	26.7
Manganese	257.61	15	0.26
Mercury			
Nickel	231.60	40	1.7
Potassium	766.49	5000	80.4
Selenium	196.09	35	2.6
Silver	328.07	10	0.28
Sodium	589.59	5000	41.6
Thallium	190.86	25	0.77
Vanadium	292.40	50	0.40
Zinc	206.20	60	2.7
Cyanide			

Comments:

USEPA - CLP

9-IN
METHOD DETECTION LIMITS (ANNUALLY)

Lab Name: DATACHEM LABORATORIES Contract: EP-W-06-054

Lab Code: DATAC Case No.: 37448 NRAS No.: _____ SDG No.: ME00C2

Instrument Type: P Instrument ID: ICP07 Date: 01/05/2008

Preparation Method: HS1

Concentration Units (ug/L or mg/kg): mg/kg

Analyte	Wavelength /Mass	CRQL	MDL
Aluminum	308.22	20	4.1
Antimony	206.83	6.0	0.33
Arsenic	189.04	1.0	0.25
Barium	455.40	20	0.12
Beryllium	313.11	0.5	0.012
Cadmium	214.44	0.5	0.011
Calcium	317.93	500	10.7
Chromium	205.55	1.0	0.46
Cobalt	228.62	5.0	0.064
Copper	324.75	2.5	0.45
Iron	259.94	10	4.1
Lead	220.35	1.0	0.22
Magnesium	279.08	500	5.8
Manganese	257.61	1.5	0.062
Mercury			
Nickel	231.60	4.0	0.33
Potassium	766.49	500	4.2
Selenium	196.09	3.5	0.26
Silver	328.07	1.0	0.047
Sodium	589.59	500	3.7
Thallium	190.86	2.5	0.17
Vanadium	292.40	5.0	0.063
Zinc	206.20	6.0	0.34
Cyanide			

Comments:

USEPA - CLP

9-IN
METHOD DETECTION LIMITS (ANNUALLY)

Lab Name: DATACHEM LABORATORIES Contract: EP-W-06-054

Lab Code: DATAC Case No.: 37448 NRAS No.: _____ SDG No.: ME00C2

Instrument Type: AS Instrument ID: WET01 Date: 01/10/2008

Preparation Method: NP1

Concentration Units (ug/L or mg/kg): ug/L

Analyte	Wavelength /Mass	CRQL	MDL
Aluminum			
Antimony			
Arsenic			
Barium			
Beryllium			
Cadmium			
Calcium			
Chromium			
Cobalt			
Copper			
Iron			
Lead			
Magnesium			
Manganese			
Mercury			
Nickel			
Potassium			
Selenium			
Silver			
Sodium			
Thallium			
Vanadium			
Zinc			
Cyanide	570.00	10	1.6

Comments:

USEPA - CLP

9-IN

METHOD DETECTION LIMITS (ANNUALLY)

Lab Name: DATACHEM LABORATORIES Contract: EP-W-06-054

Lab Code: DATAC Case No.: 37448 NRAS No.: _____ SDG No.: ME00C2

Instrument Type: AS Instrument ID: WET01 Date: 01/09/2008

Preparation Method: DS2

Concentration Units (ug/L or mg/kg): mg/kg

Analyte	Wavelength /Mass	CRQL	MDL
Aluminum			
Antimony			
Arsenic			
Barium			
Beryllium			
Cadmium			
Calcium			
Chromium			
Cobalt			
Copper			
Iron			
Lead			
Magnesium			
Manganese			
Mercury			
Nickel			
Potassium			
Selenium			
Silver			
Sodium			
Thallium			
Vanadium			
Zinc			
Cyanide	570.00	2.5	0.91

Comments:

USEPA - CLP

12-IN
PREPARATION LOG

Lab Name: DATACHEM LABORATORIES Contract: EP-W-06-054

Lab Code: DATAC Case No.: 37448 NRAS No.: _____ SDG No.: ME00C2

Preparation Method: CS1

EPA Sample No.	Preparation Date	Weight (gram)	Volume (mL)
S0	05/15/2008	0.20	100
S0.2/CRI	05/15/2008	0.20	100
S0.5	05/15/2008	0.20	100
S1.0	05/15/2008	0.20	100
S10	05/15/2008	0.20	100
S5.0	05/15/2008	0.20	100
ICB	05/15/2008	0.20	100
ICV	05/15/2008	0.20	100
CCB	05/15/2008	0.20	100
CCV	05/15/2008	0.20	100
PBS	05/15/2008	0.20	100
LCSS	05/15/2008	0.20	100
ME00C2	05/15/2008	0.20	100
ME00C3	05/15/2008	0.20	100
ME00C4	05/15/2008	0.20	100
ME00C5	05/15/2008	0.20	100
ME00C6	05/15/2008	0.20	100
ME00C7	05/15/2008	0.20	100
ME00C8	05/15/2008	0.20	100
ME00C9	05/15/2008	0.20	100
ME00D0	05/15/2008	0.20	100
ME00D1	05/15/2008	0.20	100
ME00D2	05/15/2008	0.20	100
ME00D3	05/15/2008	0.20	100
ME00D4	05/15/2008	0.20	100
ME00D5	05/15/2008	0.20	100
ME00D6	05/15/2008	0.20	100
ME00D7	05/15/2008	0.20	100
ME00D8	05/15/2008	0.20	100
ME00D9	05/15/2008	0.20	100
ME00E0	05/15/2008	0.20	100
ME00E1	05/15/2008	0.20	100
ME00E1S	05/15/2008	0.20	100

USEPA - CLP

12-IN
PREPARATION LOG

Lab Name: DATACHEM LABORATORIES Contract: EP-W-06-054

Lab Code: DATAC Case No.: 37448 NRAS No.: _____ SDG No.: ME00C2

Preparation Method: CS1

EPA Sample No.	Preparation Date	Weight (gram)	Volume (mL)
ME00E1D	05/15/2008	0.20	100

USEPA - CLP

12-IN
PREPARATION LOG

Lab Name: DATACHEM LABORATORIES Contract: EP-W-06-054

Lab Code: DATAC Case No.: 37448 NRAS No.: _____ SDG No.: ME00C2

Preparation Method: DS2

EPA Sample No.	Preparation Date	Weight (gram)	Volume (mL)
ICV	05/13/2008	1.00	50
PBS	05/13/2008	1.00	50
LCSS	05/13/2008	1.00	50
ME00C2	05/13/2008	1.00	50
ME00C3	05/13/2008	1.00	50
ME00C4	05/13/2008	1.00	50
ME00C5	05/13/2008	1.00	50
ME00C6	05/13/2008	1.00	50
ME00C7	05/13/2008	1.00	50
ME00C8	05/13/2008	1.00	50
ME00C9	05/13/2008	1.00	50
ME00D0	05/13/2008	1.00	50
ME00D1	05/13/2008	1.00	50
ME00D2	05/13/2008	1.00	50
ME00D3	05/13/2008	1.00	50
ME00D4	05/13/2008	1.00	50
ME00D5	05/13/2008	1.00	50
ME00D6	05/13/2008	1.00	50
ME00D7	05/13/2008	1.00	50
ME00D8	05/13/2008	1.00	50
ME00D9	05/13/2008	1.00	50
ME00E0	05/13/2008	1.00	50
ME00E1	05/13/2008	1.00	50
ME00E1D	05/13/2008	1.00	50
ME00E1S	05/13/2008	1.00	50
MIDRANGE	05/13/2008	1.00	50

USEPA - CLP

12-IN
PREPARATION LOG

Lab Name: DATACHEM LABORATORIES Contract: EP-W-06-054

Lab Code: DATAC Case No.: 37448 NRAS No.: _____ SDG No.: ME00C2

Preparation Method: HS1

EPA Sample No.	Preparation Date	Weight (gram)	Volume (mL)
PBS	05/13/2008	1.00	100
LCSS	05/13/2008	1.00	100
ME00C2	05/13/2008	1.00	100
ME00C3	05/13/2008	1.00	100
ME00C4	05/13/2008	1.00	100
ME00C5	05/13/2008	1.00	100
ME00C6	05/13/2008	1.00	100
ME00C7	05/13/2008	1.00	100
ME00C8	05/13/2008	1.00	100
ME00C9	05/13/2008	1.00	100
ME00D0	05/13/2008	1.00	100
ME00D1	05/13/2008	1.00	100
ME00D2	05/13/2008	1.00	100
ME00D3	05/13/2008	1.00	100
ME00D4	05/13/2008	1.00	100
ME00D5	05/13/2008	1.00	100
ME00D6	05/13/2008	1.00	100
ME00D7	05/13/2008	1.00	100
ME00D8	05/13/2008	1.00	100
ME00D9	05/13/2008	1.00	100
ME00E0	05/13/2008	1.00	100
ME00E1	05/13/2008	1.00	100
ME00E1D	05/13/2008	1.00	100
ME00E1S	05/13/2008	1.00	100

USEPA - CLP

13-IN
ANALYSIS RUN LOG

Lab Name: DATACHEM LABORATORIES Contract: EP-W-06-054

Lab Code: DATAC Case No.: 37448 NRAS No.: _____ SDG No.: ME00C2

Instrument ID: ICP07 Analysis Method: P

Start Date: 05/15/2008 End Date: 05/15/2008

EPA Sample No.	D/F	Time	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	1.0	1003	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X			
S1500	1.0	1008			X		X	X						X						X			X					
S10000	1.0	1012		X		X				X	X	X				X		X						X	X			
S50000	1.0	1017	X						X				X		X				X			X						
ICV	1.0	1022	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X			
ICB	1.0	1027	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X			
CRII	1.0	1032	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X			
ICSAI	1.0	1037	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X			
ICSABI	1.0	1042	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X			
CCV	1.0	1047	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X			
CCB	1.0	1051	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X			
EBS	1.0	1056	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X			
ICSS	1.0	1101	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X			
ME00E1	1.0	1106	X	X	X	X	X		X	X	X	X	X	X	X	X		X	X	X		X	X	X				
ME00E1S	1.0	1111		X	X	X	X			X	X	X		X		X		X		X			X	X				
ME00E1D	1.0	1116	X	X	X	X	X		X	X	X	X	X	X	X	X		X	X	X		X	X	X				
ME00E1L	5.0	1121	X	X	X	X	X		X	X	X	X	X	X	X	X		X	X	X		X	X	X				
ME00C2	1.0	1126	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X			
ME00C3	1.0	1131	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X			
ME00C4	1.0	1136	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X			
ME00C5	1.0	1141	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X			
CCV2	1.0	1146	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X			
CCB2	1.0	1151	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X			
ME00C6	1.0	1156	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X			
ME00C7	1.0	1201	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X			
ME00C8	1.0	1205	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X			
ME00C9	1.0	1210	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X			
ME00D0	1.0	1215	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X			
ME00D1	1.0	1220	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X			
ME00D2	1.0	1225	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X			
CRIF	1.0	1230	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X			
ICSAF	1.0	1235	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X			
ICSABF	1.0	1240	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X			
CCV3	1.0	1245	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X			
CCB3	1.0	1250	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X			
ME00D3	1.0	1255	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X			

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13-IN
ANALYSIS RUN LOG

Lab Name: DATACHEM LABORATORIES Contract: EP-W-06-054

Lab Code: DATAC Case No.: 37448 NRAS No.: _____ SDG No.: ME00C2

Instrument ID: ICP07 Analysis Method: P

Start Date: 05/15/2008 End Date: 05/15/2008

EPA Sample No.	D/F	Time	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		
ME0CD4	1.0	1300	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X			
ME00D5	1.0	1304	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X			
ME00D6	1.0	1309	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X			
ME00D7	1.0	1314	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X			
ME00D8	1.0	1319	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X			
ME00D9	1.0	1324	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X			
ME00E0	1.0	1329	X	X	X	X	X	X	X	X	X		X	X	X	X		X	X	X		X	X	X				
ME00E1A	1.0	1334		X												X		X					X					
ME00E1	2.0	1338						X																				
CCV4	1.0	1343	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X			
CCB4	1.0	1348	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X			
ME00E1	5.0	1353																							X			
ME00E1S	5.0	1358						X																				
ME00E1S	10	1402																							X			
ME00E1D	5.0	1407						X																				
ME00E1D	10	1412																							X			
ME00E1L	10	1417						X																				
ME00E1L	25	1422																							X			
CRIF2	1.0	1427	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X			
ICSAF2	1.0	1432	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X			
ICSABF2	1.0	1437	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X			
CCV5	1.0	1441	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X			
CCB5	1.0	1446	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X			
ME00E0	2.0	1451										X													X			
CRIF3	1.0	1456	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X			
ICSAF3	1.0	1501	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X			
ICSABF3	1.0	1506	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X			
CCV6	1.0	1511	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X			
CCB6	1.0	1516	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X		X	X	X	X			

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13-IN
ANALYSIS RUN LOG

Lab Name: DATACHEM LABORATORIES Contract: EP-W-06-054

Lab Code: DATAC Case No.: 37448 NRAS No.: _____ SDG No.: ME00C2

Instrument ID: ICP07 Analysis Method: P

Start Date: 05/19/2008 End Date: 05/19/2008

EPA Sample No.	D/F	Time	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	1.0	1003																			X							
S1500	1.0	1008																			X							
S10000	1.0	1013																										
S50000	1.0	1018																										
ICV2	1.0	1023																			X							
ICB2	1.0	1028																			X							
CRI2	1.0	1032																			X							
ICSAI2	1.0	1037	X						X				X		X						X							
ICSABI2	1.0	1042	X						X				X		X						X							
CCV7	1.0	1047																			X							
CCB7	1.0	1052																			X							
PBS	1.0	1057																			X							
LCSS	1.0	1102																			X							
ME00E1	1.0	1107																			X							
ME00E1S	1.0	1112																			X							
ME00E1D	1.0	1117																			X							
ME00E1L	5.0	1122																			X							
ME00C2	1.0	1127																			X							
ME00C3	1.0	1132																			X							
ME00C4	1.0	1137																			X							
ME00C5	1.0	1141																			X							
CCV8	1.0	1146																			X							
CCB8	1.0	1151																			X							
ME00C6	1.0	1156																			X							
ME00C7	1.0	1201																			X							
ME00C8	1.0	1206																			X							
ME00C9	1.0	1211																			X							
ME00D0	1.0	1216																			X							
ME00D1	1.0	1221																			X							
ME00D2	1.0	1226																			X							
CRIF4	1.0	1231																			X							
ICSAF4	1.0	1236	X						X				X		X						X							
ICSABF4	1.0	1241	X						X				X		X						X							
CCV9	1.0	1245																			X							
CCB9	1.0	1250																			X							
ME00D3	1.0	1255																			X							

USEPA - CLP

13-IN
ANALYSIS RUN LOG

Lab Name: DATACHEM LABORATORIES Contract: EP-W-06-054

Lab Code: DATAC Case No.: 37448 NRAS No.: _____ SDG No.: ME00C2

Instrument ID: ICP07 Analysis Method: P

Start Date: 05/19/2008 End Date: 05/19/2008

EPA Sample No.	D/F	Time	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		
ME00D4	1.0	1300																			X							
ME00D5	1.0	1305																			X							
ME00D6	1.0	1310																			X							
ME00D7	1.0	1315																			X							
ME00D8	1.0	1320																			X							
ME00D9	1.0	1324																			X							
ME00E0	1.0	1329																			X							
CCV10	1.0	1334																			X							
CCB10	1.0	1339																			X							
CRIF5	1.0	1344																			X							
ICSAF5	1.0	1349	X						X				X		X						X							
ICSABF5	1.0	1354	X						X				X		X						X							
CCV11	1.0	1359																			X							
CCB11	1.0	1403																			X							

USEPA - CLP

13-IN
ANALYSIS RUN LOG

Lab Name: DATACHEM LABORATORIES Contract: EP-W-06-054

Lab Code: DATAC Case No.: 37448 NRAS No.: _____ SDG No.: ME00C2

Instrument ID: AACV01 Analysis Method: CV

Start Date: 05/16/2008 End Date: 05/16/2008

EPA Sample No.	D/F	Time	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	1.0	1236															X											
S0.2	1.0	1238															X											
S0.5	1.0	1239															X											
S1.0	1.0	1241															X											
S5.0	1.0	1242															X											
S10	1.0	1244															X											
ICV	1.0	1245															X											
ICB	1.0	1247															X											
CRII	1.0	1248															X											
CCV	1.0	1250															X											
CCB	1.0	1251															X											
FBS	1.0	1253															X											
LCSS	1.0	1254															X											
ME00C2	1.0	1255															X											
ME00C3	1.0	1257															X											
ME00C4	1.0	1258															X											
ME00C5	1.0	1300															X											
ME00C6	1.0	1301															X											
ME00C7	1.0	1303															X											
ME00C8	1.0	1304															X											
CCV2	1.0	1306															X											
CCB2	1.0	1307															X											
ME00C9	1.0	1309															X											
ME00D0	1.0	1310															X											
ME00D1	1.0	1312															X											
ME00D2	1.0	1313															X											
ME00D3	1.0	1315															X											
ME00D4	1.0	1316															X											
ME00D5	1.0	1317															X											
CRIF	1.0	1319															X											
CCV3	1.0	1320															X											
CCB3	1.0	1322															X											
ME00D6	1.0	1323															X											
ME00D7	1.0	1325															X											
ME00D8	1.0	1326															X											
ME00D9	1.0	1328															X											

USEPA - CLP

13-IN
ANALYSIS RUN LOG

Lab Name: DATACHEM LABORATORIES Contract: EP-W-06-054

Lab Code: DATAC Case No.: 37448 NRAS No.: _____ SDG No.: ME00C2

Instrument ID: AACV01 Analysis Method: CV

Start Date: 05/16/2008 End Date: 05/16/2008

EPA Sample No.	D/F	Time	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		
ME00E0	1.0	1329															X											
ME00E1	1.0	1331															X											
ME00E1S	1.0	1332															X											
ME00E1D	1.0	1334															X											
CRIF2	1.0	1335															X											
CCV4	1.0	1336															X											
CCB4	1.0	1338															X											

USEPA - CLP

13-IN
ANALYSIS RUN LOG

Lab Name: DATACHEM LABORATORIES Contract: EP-W-06-054

Lab Code: DATAC Case No.: 37448 NRAS No.: _____ SDG No.: ME00C2

Instrument ID: WET01 Analysis Method: AS

Start Date: 05/15/2008 End Date: 05/15/2008

EPA Sample No.	D/F	Time	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	1.0	1247																								X		
S10	1.0	1250																								X		
S50	1.0	1250																								X		
S100	1.0	1251																								X		
S200	1.0	1251																								X		
S300	1.0	1254																								X		
S400	1.0	1254																								X		
ICV	1.0	1255																								X		
ICB	1.0	1256																								X		
CRII	1.0	1258																								X		
CCV1	1.0	1259																								X		
CCB1	1.0	1300																								X		
MIDRANGE	1.0	1300																								X		
LCSS	1.0	1303																								X		
PBS	1.0	1303																								X		
ME00C2	1.0	1304																								X		
ME00C3	1.0	1304																								X		
ME00C4	1.0	1307																								X		
ME00C5	1.0	1307																								X		
ME00C6	1.0	1308																								X		
ME00C7	1.0	1308																								X		
CCV2	1.0	1311																								X		
CCB2	1.0	1311																								X		
ME00C8	1.0	1312																								X		
ME00C9	1.0	1312																								X		
ME00D0	1.0	1315																								X		
ME00D1	1.0	1315																								X		
ME00D2	1.0	1316																								X		
ME00D3	1.0	1317																								X		
ME00D4	1.0	1319																								X		
ME00D5	1.0	1320																								X		
ME00D6	1.0	1321																								X		
CRIFI	1.0	1321																								X		
CCV3	1.0	1324																								X		
CCB3	1.0	1324																								X		
ME00D7	1.0	1325																								X		

USEPA - CLP

13-IN
ANALYSIS RUN LOG

Lab Name: DATACHEM LABORATORIES Contract: EP-W-06-054

Lab Code: DATAC Case No.: 37448 NRAS No.: _____ SDG No.: ME00C2

Instrument ID: WET01 Analysis Method: AS

Start Date: 05/15/2008 End Date: 05/15/2008

EPA Sample No.	D/F	Time	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		
ME00D8	1.0	1325																								X		
ME00D9	1.0	1328																								X		
ME00E0	1.0	1328																								X		
ME00E1	1.0	1329																								X		
ME00E1D	1.0	1333																								X		
ME00E1S	1.0	1333																								X		
CRIF2	1.0	1334																								X		
CCV4	1.0	1335																								X		
CCB4	1.0	1337																								X		
ME00E1A	1.0	1356																								X		
CRIF3	1.0	1356																								X		
CCV5	1.0	1357																								X		
CCB5	1.0	1357																								X		

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V
ESD Central Regional Laboratory
Data Tracking Form for Contract Samples

Sample Delivery Group: ME00C2 CERCLIS No: ILD048843809

Case No: 37448 Site Name/Location: Chemetco (IL)

Contractor or EPA Lab: DMACHem Data User: IEPA

No. of Samples: 20 Date Sampled or Date Received: 27 May 08

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: 20 No. of samples received: ____

Received by: Pdavis Date: 27 May 08

Received by LSSS: Pdavis Date: 27 May 08

Review started: 5/29/08 Reviewer Signature: [signature]

Total time spent on review: 17 + 3 Date review completed: 6/5/08

Copied by: A. C. Harvey Date: June 5, 2008

Mailed to user by: Pdavis Date: 6 June 08

DATA USER:
Please fill in the blanks below and return this form to:
Sylvia Griffin, Data Mgmt. Coordinator, Region V, ML-10C

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. Date: ____

Explanations:

ILM05.4-HS1 Physical Description Log

CASE: 37448 **SDG:** ME00E2 **DCL SET ID:** 8129025

Sample ID	Matrix	Method	Prep Date	Amount of Sample Used (g)	Final Volume of Digested Samples (mL)	pH	Color/Clarity, Texture Before	Color/Clarity, Texture After	Comments	Init.
PBS	Method Reagents	ILM05.4 HS1	5/22/2008	NA	100 mL	NA	N/CL	N/CL	NA	KK
LCSS	LCS-S (0405)			1.0000			O/F	Y/CL		
ME00E2	Soil			0.9954			BR/M	Y/CL		
ME00E3				0.9928			BR/M			
ME00E4				1.0060			BR/M			
ME00E5				1.0082			BR/M			
ME00E6				1.0084			BR/M			
ME00E7				1.0059			BR/M			
ME00E8				1.0052			BR/M			
ME00F8				0.9969			BR/M			
ME00F9				1.0042			BR/M			
ME00G0				0.9929			BR/M			
ME00G1				0.9963			BR/M			
ME00G2				0.9970			BR/M			
ME00G2S				0.9980			BR/M			
ME00G2D				1.0006			BR/M			

COLOR			TEXTURE		CLARITY
BL = Black	GR = Gray	BR = Brown		F = Fine	CL = Clear
Y = Yellow	R = Red	GN = Green		M = Medium	CO = Cloudy
		O = Orange		C = Coarse	

KK 5/22/08

KK 5/22/08

CONTINUED ON PAGE# X

Preparer Signature/Date: 5/22/08

Reviewer Signature/Date: 5/22/08

SDG/PREP GROUP# SDG ME00E2 CONTINUED FROM PAGE#: 343/153

Explanations:

ILM05.4-CS1 PHYSICAL DESCRIPTION

CASE: 37448 SDG: ME00E2 DCL SET ID: 8129025

	DCL Sample #	Matrix	Method **	Prep Date and Time	Amount of Sample Used (g)	Final Volume of Samples (mL)	pH	Amount of Hg Sol. Used	Comments	Init.
Calibration Standards	S0.0	ASTM Type II H_2O	ILM05.4 CS1	5/20/2008 10:00	NA	100mL sample + 40.5mL reagents	NA	NA	NA	CH
	S0.2/CRI							200µL of Sol. B	Sol. B = 0.1µg/mL	
	S0.5							500µL of Sol. B	Sol. B = 0.1µg/mL	
	S1.0							100µL of Sol. A	Sol. A = 1.0µg/mL	
	S5.0/CCV							500µL of Sol. A	Sol. A = 1.0µg/mL	
	S10.0							1000µL of Sol. A	Sol. A = 1.0µg/mL	
ICV								1000µL of EPA Sol.	IM08008	
ICB/CCB								NA	NA	
PBS										
LCSS		LCS-S (0405)			0.2014				IP-PS-06-109	
ME00E2		Soil			0.2064				NA	
ME00E3					0.2039					
ME00E4					0.1952					
ME00E5					0.2026					
ME00E6					0.1971					
ME00E7					0.2089					
ME00E8					0.1966					
ME00F8					0.1981					
ME00F9					0.2081					
ME00G0					0.1936					
ME00G1					0.1993					
ME00G2					0.1947					
ME00G2S					0.1987			100µL of Sol. A	Sol. A=1.0µg/mL	
ME00G2D					0.2034			NA	NA	

ILM05.4-CS1 ANALYSIS STANDARDS TABLE

	Standard ID	Spike Source	Spike Volume	Final Volume	Hg Concentration
Calibration Standards	S0.0	NONE	NONE	100 mL sample + 40.5 mL reagents	0 µg/L
	S0.2/CRI	Solution B	200µL		0.2 µg/L
	S0.5	Solution B	500µL		0.5 µg/L
	S1.0	Solution A	100µL		1.0 µg/L
	S5.0/CCV	Solution A	500µL		5.0 µg/L
	S10.0	Solution A	1000µL		10.0 µg/L

Solution A: IHg052008A = (STD# 1936) = 1.0µg/mL Solution B: IHg052008B = (STD# 1937) = 0.1µg/mL

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Preparer Signature/Date: Christopher R Hansen 5/20/2008

Reviewer Signature/Date: Gemma C. Sanchez 5/21/08 204

SDG/PREP GROUP# ME00E2 CWC/382 CONTINUED FROM PAGE#: 077

Explanations: Insertion of write-up.

Distillation Physical Description Log

CASE: 37448 **SDG:** ME00E2 **Set ID(s):** 8129025

DCL Sample #	Matrix	Method **	Prep Date	Amount of Sample Used (g)	Final Volume of Digested Samples	*Color/Clarity, Texture Before	After	Init.
ICV	0.01N NaOH	ILM05.4 DS2	5/14/2008	(50mL)	50mL	NA	N/CL	SA
MIDRANGE	↓			↓		NA		
PBS	EM SAND, LOT 36212726			1.0019		T/F		
LCSS	LCS-CN (0899)			1.0022		T/F		
ME00E2	SOIL			0.9998		BL/C		
ME00E3				1.0009		BL/C		
ME00E4				1.0008		BL/M		
ME00E5				1.0019		BR/M		
ME00E6				1.0046		BL/C		
ME00E7				0.9999		BL/C		
ME00E8				1.0034		BL/C		
ME00F8				0.9983		BR/M		
ME00F9				1.0023		BR/M		
ME00G0				1.0026		BL/M		
ME00G1				1.0025		BR/M		
ME00G2				1.0024		BR/M		
ME00G2D				1.0009		BR/M		
ME00G2S	↓	↓	↓	1.0027	↓	BR/M	↓	↓

COLOR			TEXTURE	
BL = Black	GR = Gray	BR = Brown	C = Clay	F = Fine
N=Colorless	R = Red	GN = Green	CL=Clear	M = Medium
		O = Orange		CR = Coarse

SA 5/15/08

SA 5/15/08

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Preparer Signature/Date: [signature] 5/15/09 SA 5/15/08

Reviewer Signature/Date: [signature] 05/15/09

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Explanations:

ILM05.4-HS1 Physical Description Log

CASE: 37448 **SDG:** ME00C2 **DCL SET ID:** 8129024

Sample ID	Matrix	Method	Prep Date	Amount of Sample Used (g)	Final Volume of Digested Samples (mL)	pH	Color/Clarity, Texture Before	Color/Clarity, Texture After	Comments	Init.
PBS	Method Reagents	ILM05.4 HS1	5/13/2008	NA	100 mL	NA	N/CL	N/CL	NA	KK
LCSS	LCS-S (0405)			1.0024			O/F	Y/CL		
ME00C2	Soil			1.0035			BR/M	Y/CL		
ME00C3				0.9927			BR/M			
ME00C4				0.9974			BR/M			
ME00C5				1.0046			BR/M			
ME00C6				1.0035			BR/M			
ME00C7				1.0032			BR/M			
ME00C8				1.0082			BR/M			
ME00C9				1.0073			BR/M			
ME00D0				1.0070			BR/M			
ME00D1				1.0093			BR/M			
ME00D2				0.9950			BR/M			
ME00D3				1.0003			BR/M			
ME00D4				1.0017			BR/M			
ME00D5				0.9953			BR/M			
ME00D6				1.0066			BR/M			
ME00D7				1.0047			BR/M			
ME00D8				0.9922			BR/M			
ME00D9				0.9969			BR/M			
ME00E0				1.0081			BR/M			
ME00E1				0.9949			BR/M			
ME00E1S				0.9972			BR/M			
ME00E1D				0.9996			BR/M			

COLOR			TEXTURE	CLARITY
BL = Black	GR = Gray	GN = Green		CL = Clear
Y = Yellow	R = Red	O = Orange		CO = Cloudy
N = Colorless	BR = Brown		F = Fine	
			M = Medium	
			C = Coarse	

KK 5/13/08

KK 5/13/08

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Preparer Signature/Date: 5/13/08 - 98 -

Reviewer Signature/Date: 5-13-2008

SDG/PREP GROUP# SDG ME00C2 CONTINUED FROM PAGE#: 343/145

Explanations:

ILM05.4-CS1 PHYSICAL DESCRIPTION

CASE: 37448 SDG: ME00C2 DCL SET ID: 8129024

	DCL Sample #	Matrix	Method **	Prep Date and Time	Amount of Sample Used (g)	Final Volume of Samples (mL)	pH	Amount of Hg Sol. Used	Comments	Init.
Calibration Standards	S0.0	ASTM Type II H_2O	ILM05.4 CS1	5/15/08 10:53	NA	100mL sample + 40.5mL reagents	NA	NA	NA	CRH
	S0.2/CRI							200µL of Sol. B	Sol. B = 0.1µg/mL	
	S0.5							500µL of Sol. B	Sol. B = 0.1µg/mL	
	S1.0							100µL of Sol. A	Sol. A = 1.0µg/mL	
	S5.0/CCV							500µL of Sol. A	Sol. A = 1.0µg/mL	
	S10.0							1000µL of Sol. A	Sol. A = 1.0µg/mL	
	ICV							1000µL of EPA Sol.	IM08008	
	ICB/CCB							NA	NA	
	PBS									
	LCSS	LCS-S (0405)			0.2012				~~IP-PS-06-108~~ Book2261/Page88	
	ME00C2	Soil			0.2022				NA	
	ME00C3				0.2075					
	ME00C4				0.1958					
	ME00C5				0.1952					
	ME00C6				0.2064					
	ME00C7				0.2067					
	ME00C8				0.2041					
	ME00C9				0.2058					
	ME00D0				0.1993					
	ME00D1				0.2074					
	ME00D2				0.2028					
	ME00D3				0.1997					
	ME00D4				0.1977					
	ME00D5				0.1919					
	ME00D6				0.2036					
	ME00D7				0.2067					
	ME00D8				0.1965					
	ME00D9				0.2009					
	ME00E0				0.1913					
	ME00E1				0.2091					
	ME00E1S				0.1980			100µL of Sol. A	Sol. A=1.0µg/mL	
	ME00E1D				0.1995			NA	NA	

CH 5/16/08

ILM05.4-CS1 ANALYSIS STANDARDS TABLE

	Standard ID	Spike Source	Spike Volume	Final Volume	Hg Concentration
Calibration Standards	S0.0	NONE	NONE	100 mL sample + 40.5 mL reagents	0 µg/L
	S0.2/CRI	Solution B	200µL		0.2 µg/L
	S0.5	Solution B	500µL		0.5 µg/L
	S1.0	Solution A	100µL		1.0 µg/L
	S5.0/CCV	Solution A	500µL		5.0 µg/L
	S10.0	Solution A	1000uL		10.0 µg/L

CH 5/16/08

Solution A: IHg051508A(STD#1909) = 1.0µg/mL Solution B: IHg051508B(STD#1910) = 0.1µg/mL

~~Standard A = IHg051508A(STD#1909) = 1.0µg/mL~~ ~~Solution B = IHg051508B(STD#1910) = 0.1µg/mL~~ CH 5/16/08 CH 5/16/08 CH 5/16/08 CH 5/16/08

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Preparer Signature/Date: Christopher R. Hansen 5/16/2008

Reviewer Signature/Date: 5/16/08

SDG/PREP GROUP# ME00C2 EWC/1381 CONTINUED FROM PAGE#: 075

Explanations: Insertion of write-up.

Distillation Physical Description Log

CASE: 37448 **SDG:** ME00C2 **Set ID(s):** 8129024

DCL Sample #	Matrix	Method **	Prep Date	Amount of Sample Used (g)	Final Volume of Digested Samples	*Color/Clarity, Texture Before	*Color/Clarity, Texture After	Init.
ICV	0.01N NaOH	ILM05.4 DS2	5/13/2008	(50mL)	50mL	NA	N/CL	SA
MIDRANGE	↓			↓		NA		
PBS	EM SAND, LOT 362F2726			1.0011		T/F		
LCSS	LCS-CN (0899)			1.0025		T/F		
ME00C2	SOIL			1.0001		GR/CL		
ME00C3				0.9999		BR/F		
ME00C4				0.9959		BR/F		
ME00C5				1.0026		BR/F		
ME00C6				1.0014		BR/F		
ME00C7				0.9981		BR/M		
ME00C8				1.0019		BR/M		
ME00C9				1.0001		BR/M		
ME00D0				1.0037		BR/M		
ME00D1				1.0046		BR/C		
ME00D2				1.0031		BR/C		
ME00D3				0.9988		BR/C		
ME00D4				0.9962		BR/M		
ME00D5				1.0027		BR/CR		
ME00D6				1.0034		BR/CR		
ME00D7				1.0021		BR/M		
ME00D8				1.0035		GR/M		
ME00D9				1.0004		BR/M		
ME00E0				1.0001		BR/CR		
ME00E1				0.9963		BR/M		
ME00E1D				0.9979		BR/M		
ME00E1S	↓	↓	↓	0.9967	↓	BR/M	↓	↓

COLOR	T = Tan	BR = Brown	TEXTURE	F = Fine
BL = Black	GR = Gray	GN = Green	C = Clay	M = Medium
N=Colorless	R = Red	O = Orange	CL=Clear	CR = Coarse

SA 5/13/08

BS 5/13/08

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Preparer Signature/Date: [signature] 5/13/08

Reviewer Signature/Date: [signature] 05/15/08