UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
ENVIRONMENTAL SCIENCE CENTER
701 MAPES ROAD
FORT MEADE, MARYLAND 20755-5350

DATE : January 13, 2009

SUBJECT: Region III Data QA Review

FROM : Khin Cho Thaung KCT
Region III ESAT RPO (3EA20)

TO : Robert Kelly
Regional Project Manager

Attached is the organic data validation report for the Twin City Metal & Iron Company site (CASE# 38123, SDG#: C0114) completed by the Region III Environmental Services Assistance Team (ESAT) contractor under the direction of Region III EAID.

If you have any questions regarding this review, please call me at (410) 305-2743.

Attachments

cc: Gene Nance (Tech Law)

TO File: #0014 TDF#: 01004

Lockheed Martin Enterprise Solutions & Services
ESAT Region 3
US EPA Environmental Science Center
701 Mapes Road Ft. Meade, MD 20755-5350
Telephone 410-305-3037 Facsimile 410-305-3597

LOCKHEED MARTIN
We never forget who we're working for™

DATE: January 12, 2009

SUBJECT: Organic Data Validation (Level M3)
Site: Twin City Metal & Iron Company
Case: 38123 SDG: C0114

FROM: Kenneth W. Curry
Senior Data Reviewer

Mahboobeh Mecanic
Senior Oversight Chemist

TO: Khin-Cho Thaung
ESAT Region 3 Project Officer

OVERVIEW

Case 38123, Sample Delivery Group (SDG) C0114, from the Twin City Metal & Iron Company site consisted of ten (10) soil and five (5) aqueous samples analyzed for Aroclor compounds by Mitkem Corporation (MITKEM). The sample set included one (1) field blank, one (1) aqueous field duplicate pair and two (2) soil field duplicate pairs. Samples were analyzed according to Contract Laboratory Program (CLP) Statement of Work (SOW) SOM01.2 through the Routine Analysis Services (RAS) program.

SUMMARY

Data were validated according to Region III Modifications to the National Functional Guidelines for Organic Data Review, Level M3. No problems were detected during validation of these data.

NOTES

- Aroclor results with %Ds greater than twenty-five percent (>25%) between the two (2) analytical columns were qualified "J" on the DSFs.
- Sample weights other than thirty (30) grams were used in the analyses of the soil samples. The dilution factors reported on the DSFs reflect actual sample weights analyzed.
- All Laboratory Control Sample (LCS) recoveries were within control limits.
- Results for field duplicate pairs sample pairs C0116/C0117, C0121/C0122 and C0132/C0142, were comparable.
- In the Matrix Spike/Matrix Spike Duplicate (MS/MSD) analyses of sample C0115, MS and MSD recoveries of Aroclor-1260 were outside the lower control limits on both columns. In addition, the Relative Percent Differences (RPDs) for Aroclor-1016 were outside control limits on both columns. These outliers may be due to the high concentrations of these Aroclors in the parent sample. No data were qualified based on these findings.

- A non-spiked compound was detected in the analysis of sample C0115 and the MS/MSD analyses of this sample. Results and precision estimate are as follows:

	Concentration µg/Kg			
Compound	C0115	MS	MSD	%RSD
Aroclor-1254	810 E	310 E	410 E	52

%RSD = Percent Relative Standard Deviation
E = Exceeded Calibration Range

- Based on sample screening, sample C0137 was initially analyzed at a fifty fold (50X) dilution. The CRQLs in this sample are elevated due to this dilution.

- Samples listed below were re-analyzed at dilutions due to one (1) or more compounds exceeding the calibration range in the initial analyses. The positive results for these compounds in these samples were reported from the diluted analysis and annotated with a "+" symbol on the DSFs.

Sample	Dilution Factor	Compound(s)
C0115	5X	Aroclor-1254, Aroclor-1260
C0125	10X	Aroclor-1254, Aroclor-1260
C0129	2X	Aroclor-1248
C0132	2X	Aroclor-1260
C0137	500X	Aroclor-1248
C0142	3X	Aroclor-1260

All data for Case 38123, SDG C0114, were reviewed in accordance with Region III Modifications to the National Functional Guidelines for Organic Data Review, September 1994.

ATTACHMENTS

1) Appendix A - Glossary of Data Qualifiers
2) Appendix B - Data Summary Forms
3) Appendix C - Chain of Custody (COC) Records
4) Appendix D - Laboratory Case Narrative

DCN: 38123M3

Appendix A

Glossary of Data Qualifiers

GLOSSARY OF DATA QUALIFIER CODES (ORGANIC)

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

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

NO CODE = Confirmed identification.

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

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

N = Tentative identification. Consider present. Special methods may be needed to confirm its presence or absence in future sampling efforts.

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

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

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

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

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

UL = Not detected, quantitation limit is probably higher.

OTHER CODES

NJ = Qualitative identification questionable due to poor resolution. Presumptively present at approximate quantity.

Q = No analytical result.

Appendix B

Data Summary Forms

DATA SUMMARY FORM: Aroclor

Case #: 38123
Site :
Lab. :

SDG : C0114
TWIN CITY METAL & IRON COMPANY
MITKEM

Number of Soil Samples : 10
Number of Water Samples : 5

Sample Number :		C0114		C0115		C0116		C0117		C0125	
Sampling Location :		SD01		SD02		SD03 Field Dup. of C0117		SD04 Field Dup. of C0116		SS06	
Matrix :		Soil		Soil		Soil		Soil		Soil	
Units :		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :		12/9/2008		12/9/2008		12/9/2008		12/9/2008		12/9/2008	
Time Sampled :		10:09		10:33		11:10		11:15		16:05	
%Moisture :		29		20		15		18		32	
Dilution Factor :		0.98		0.98/4.92		0.99		0.99		0.99/9.90	
Aroclor Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Aroclor-1016	33										
Aroclor-1221	33										
Aroclor-1232	33										
Aroclor-1242	33										
Aroclor-1248	33										
Aroclor-1254	33	180		1200+						2600+	
Aroclor-1260	33			870+						5100+	
Aroclor-1262	33										
Aroclor-1268	33										

CRQL = Contract Required Quantitation Limit
To calculate sample quantitation limits: (CRQL * Dilution Factor) / [(100 - %Moisture) / 100]

SEE NARRATIVE FOR CODE DEFINITIONS
Revised 09/99

Sample Number :		C0127		C0129		C0132		C0137		C0142	
Sampling Location :		SS09		SS14		SS17 Field Dup. of C0142		SS31		SS67 Field Dup. of C0132	
Matrix :		Soil		Soil		Soil		Soil		Soil	
Units :		ug/Kg		ug/Kg		ug/Kg		ug/Kg		ug/Kg	
Date Sampled :		12/9/2008		12/9/2008		12/9/2008		12/9/2008		12/9/2008	
Time Sampled :		15:43		15:26		15:08		14:39		15:10	
%Moisture :		44		19		14		25		14	
Dilution Factor :		0.99		0.98/1.97		0.99/1.98		50.0/500.0		0.99/2.97	
Aroclor Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Aroclor-1016	33										
Aroclor-1221	33										
Aroclor-1232	33										
Aroclor-1242	33										
Aroclor-1248	33			560+	J			66000+	J		
Aroclor-1254		313		30		220	J			280	
Aroclor-1260						480+				530+	
Aroclor-1262	33										
Aroclor-1268	33										

CRQL = Contract Required Quantitation Limit
To calculate sample quantitation limits: (CRQL * Dilution Factor) / [(100 - %Moisture) / 100]
+ = Result reported from the diluted analysis.

SEE NARRATIVE FOR CODE DEFINITIONS
Revised 09/99

Case #: 38123 SDG : C0114
Site : TWIN CITY METAL & IRON COMPANY
Lab. : MITKEM

Sample Number :		C0118		C0119		C0120		C0121		C0122	
Sampling Location :		FB-01		SW01		SW02		SW03		SW04	
Field QC:		Field Blank						Field Dup. of C0122		Field Dup. of C0121	
Matrix :		Water		Water		Water		Water		Water	
Units :		ug/L		ug/L		ug/L		ug/L		ug/L	
Date Sampled :		12/9/2008		12/9/2008		12/9/2008		12/9/2008		12/9/2008	
Time Sampled :		14:11		10:04		10:22		10:55		11:00	
Dilution Factor :		1.0		1.0		1.0		1.0		1.0	
Aroclor Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
*Aroclor-1016	1.0										
*Aroclor-1221	1.0										
*Aroclor-1232	1.0										
*Aroclor-1242	1.0										
*Aroclor-1248	1.0										
*Aroclor-1254	1.0										
*Aroclor-1260	1.0										
*Aroclor-1262	1.0										
*Aroclor-1268	1.0										

CRQL = Contract Required Quantitation Limit *Action Level Exists SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits: (CRQL * Dilution Factor) Revised 09/99

Appendix C

Chain of Custody (COC) Records

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

Case No: 38123 R
DAS No:

Region:	3	Date Shipped:	12/10/2008
Project Code:	CT4433	Carrier Name:	FedEx
Account Code:	2009T03N302DC6C03ENRS00	Airbill:	8663 7154 9788
CERCLIS ID:	VAD034557579	Shipped to:	Mitkem Corporation 175 Metro Center Blvd. Warwick RI 02886 (401) 732-3400
Spill ID:	EN		
Site Name/State:	Twin Cities Iron and Metal/VA		
Project Leader:	Michelle Dallessandro		
Action:	Removal Action		
Sampling Co:	TechLaw, Inc.		

Chain of Custody Record

Relinquished By	(Date / Time)	Received By	(Date / Time)
1	12.10.08 1600		
2			
3			
4			

Sampler Signature:

ORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	INORGANIC SAMPLE No.	QC Type
C0114	Sediment/ Gene Nance	L/G	ARO (14)	698 (Ice Only) (1)	SD01	S: 12/9/2008 10:09		–
C0115	Sediment/ Gene Nance	L/G	ARO (14)	700 (Ice Only) (1)	SD02	S: 12/9/2008 10:33		Lab QC
C0116	Sediment/ Gene Nance	L/G	ARO (14)	702 (Ice Only) (1)	SD03	S: 12/9/2008 11:10		–
C0117	Sediment/ Gene Nance	L/G	ARO (14)	704 (Ice Only) (1)	SD04	S: 12/9/2008 11:15		Field Duplicate of SD03
C0125	Soil/Sediment/ Gene Nance	L/G	ARO (14)	740 (Ice Only) (1)	SS06	S: 12/9/2008 16:05		–
C0127	Soil/Sediment/ Gene Nance	L/G	ARO (14)	743 (Ice Only) (1)	SS09	S: 12/9/2008 15:43		–
C0129	Soil/Sediment/ Gene Nance	L/G	ARO (14)	747 (Ice Only) (1)	SS14	S: 12/9/2008 15:26		Lab QC
C0132	Soil/Sediment/ Gene Nance	L/G	ARO (14)	751 (Ice Only) (1)	SS17	S: 12/9/2008 15:08		–
C0137	Soil/Sediment/ Gene Nance	L/G	ARO (14)	757 (Ice Only) (1)	SS31	S: 12/9/2008 14:39		–
C0142	Soil/Sediment/ Gene Nance	L/G	ARO (14)	763 (Ice Only) (1)	SS87	S: 12/9/2008 15:10		Field Duplicate of SS17

Shipment for Case Complete? Y	Sample(s) to be used for laboratory QC: C0115, C0129	Additional Sampler Signature(s):	Chain of Custody Seal Number:
Analysis Key: ARO = Arochlors Soil/Sediment	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Shipment Iced?

TR Number: 3-532217917-121008-0004

REGION COPY

PR provides preliminary results. Requests for preliminary results will increase analytical costs.

F2V61.043 Page 1 of 1

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

Case No: 38123 R
DAS No:

Region:	3	Date Shipped:	12/10/2008	Chain of Custody Record	Sampler Signature:
Project Code:	CT4433	Carrier Name:	FedEx	Relinquished By (Date / Time)	Received By (Date / Time)
Account Code:	2009T03N302DC6C03ENRS00	Airbill:	886371549700	1 [signature] 12-10-08/1600	
CERCLIS ID:	VAD034557579	Shipped to:	Mitkem Corporation 175 Metro Center Blvd. Warwick RI 02886 (401) 732-3400	2	
Spill ID:	EN			3	
Site Name/State:	Twin Cities Iron and Metal/VA			4	
Project Leader:	Michael DeFessandro				
Action:	Removal Action				
Sampling Co:	TechLaw, Inc.				

ORGANIC SAMPLE No.	MATRIX/ SAMPLE	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	INORGANIC SAMPLE No.	QC Type
C0116	Surface Water/ Gene Nance	L/G	AROC (14)	736 (Ice Only), 737 (Ice Only) (2)	FB-01	S: 12/9/2008 14:11		Field Blank
C0121	Surface Water/ Gene Nance	L/G	AROC (14)	731 (Ice Only), 732 (Ice Only) (2)	SW03	S: 12/9/2008 10:55		--
C0122	Surface Water/ Gene Nance	L/G	AROC (14)	734 (Ice Only), 735 (Ice Only) (2)	SW04	S: 12/9/2008 11:00		Field Duplicate of SW03

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

AROC = Arochlors Water

TR Number: 3-532217917-121008-0002

REGION COPY

PR provides preliminary results. Requests for preliminary results will increase analytical costs.

FZV51.043 Page 1 of 1

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

Case No: 38123
DAS No:
SDG No: C0114

L

Date Shipped:	12/10/2008
Carrier Name:	FedEx
Airbill:	866371549635
Shipped to:	Mitkem Corporation 175 Metro Center Blvd. Warwick RI 02886 (401) 732-3400

Chain of Custody Record

Relinquished By	(Date / Time)	Received By	(Date / Time)
1	12-10-08/1600		12/11/08 9:45
2			
3			
4			

Sampler Signature:

For Lab Use Only

Lab Contract No:	EP-W-05-030
Unit Price:	$524.40
Transfer To:	—
Lab Contract No:	—
Unit Price:	—

	ORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		INORGANIC SAMPLE No.	FOR LAB USE ONLY Sample Condition On Receipt
14	C0119	Surface Water/ Gene Nance	L/G	AROC (14)	728 (Ice Only), 729 (Ice Only) (2)	SW01	S: 12/9/2008	10:04		OK
15	C0120	Surface Water/ Gene Nance	L/G	AROC (14)	722 (Ice Only), 723 (Ice Only), 724 (Ice Only), 725 (Ice Only), 726 (Ice Only), 727 (Ice Only) (6)	SW02	S: 12/9/2008	10:22		OK

Shipment for Case Complete? N	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Cooler Temperature Upon Receipt:	Chain of Custody Seal Number:	
	C0120		7.0		
Analysis Key:	**Concentration:** L = Low, M = Low/Medium, H = High	**Type/Designate:** Composite = C, Grab = G		**Custody Seal Intact?** Y	**Shipment Iced?** Y
AROC = Arochlors Water					

TR Number: 3-532217917-121008-0001

PR provides preliminary results. Requests for preliminary results will increase analytical costs.

LABORATORY COPY

5585

U.S. EPA Region III Analytical Request Form

Revision 10.06

ASQAB USE ONLY		
RAS#	CT4433	Analytical TAT
DAS#		14 DAYS
NSF#		

Date: 11/29/08	Site Activity: Sampling Assessment		
Site Name: Twin City Metal and Iron CO.INC.		Street Address: 1000 Fairview Street	
City: Bristol	State: VA	Latitude:	Longitude:
Program: Superfund	Acct. #: 2009 T03N302DC6C03ENRS00	CERCLIS #: VAD034557579	
Site ID: 03EN	Spill ID:	Operable Unit:	
Site Specific QA Plan Submitted: ☐ No ☒ Yes	Title: Sampling QA/QC Work Plan		Date Approved:
EPA Project Leader: Robert F. Kelly	Phone#: 215-814-3268	Cell Phone #: 215-266-7456	E-mail: Kelly.robertj@epa.gov
Request Preparer: Gene Nance	Phone#: 740-867-0968	Cell Phone #: 304-830-1442	E-mail: gnance@techlawinc.com
Site Leader: Michelle Dallessandro	Phone#: 304-230-1230	Cell Phone #: 304-830-1444	E-mail: mdallessandro@techlawinc.com
Contractor: TechLaw, Inc.	EPA CO/PO: Murray/Wodarczyk		

#Samples 24	Matrix: soil/sediment	Parameter: TAL ICP-AES Total Metals+Hg	Method: ILM05.4 ICP-AES 29981
#Samples 5	Matrix: surface water	Parameter: TAL ICP-MS Total Metals+Hg	Method: ILM05.4 ICP-MS 29982
#Samples 5	Matrix: surface water	Parameter: Al, Ca, Fe, Mg, Na, K	Method: ILM05.4 ICP-AES 29983
#Samples 1	Matrix: Water (QC-rinsate)	Parameter: TAL ICP-AES Total Metals+Hg	Method: ILM05.4 ICP-AES
#Samples 10	Matrix: soil/sediment	Parameter: PCBs (Aroclors)	Method: SOM01.2 29979
#Samples 5	Matrix: surface water	Parameter: PCBs (Aroclors)	Method: SOM01.2 29980
#Samples	Matrix:	Parameter:	Method:
#Samples	Matrix:	Parameter:	Method:
#Samples	Matrix:	Parameter:	Method:

Ship Date From: December 10, 2008	Ship Date To: December 11, 2008	Org. Validation Level M3	Inorg. Validation Level IM2

Unvalidated Data Requested: ☐ No ☒ **Yes** If Yes, TAT Needed: ☒ **14days** ☐ 7days ☐ 72hrs ☐ 48hrs ☐ 24hrs ☐ Other (Specify)

Validated Data Package Due: ☐ 42 days ☒ 30 days ☐ 21days ☐ 14 days ☐ Other (Specify) N/A

Electronic Data Deliverables Required: ☐ No ☒ Yes (EDDs will be provided in Region 3 EDD Format)

Special Instructions:

Surface water samples for TAL ICP-MS metals and Al, Ca, Fe, Mg, Na, K analyses will be collected in one sample bottle under the assumption that they will be assigned to the same laboratory.

TAL for ICP-MS metals and ICP-AES metals and TCL for PCB (Aroclors) are attached.

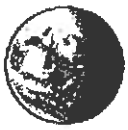
Quality Assurance Project Plan (QAPP) For START Sampling Activities Submitted To U S EPA Region III.

Judy Snyder/ESC/R3/USEPA/US
01/08/2009 11:18 AM

To Ken Curry/ESC/R3/USEPA/US@EPA, Lisa Penix/ESC/R3/USEPA/US
cc
bcc
Subject Fw: duplicate pairs for Twin Cities Iron and Metal Site case number 38123

****

Judy Snyder
ESAT Auditor, Region 3
Lockheed Martin Enterprise Solutions & Services
701 Mapes Road
Ft. Meade, MD 20755-5350
Phone 410-305-3015
Fax 410-305-3095
----- Forwarded by Judy Snyder/ESC/R3/USEPA/US on 01/08/2009 11:18 AM -----



"Dallessandro, Michelle" <Mdallessandro@TechLawInc.com>
01/08/2009 11:12 AM

To Judy Snyder/ESC/R3/USEPA/US@EPA
cc "Nance, Gene" <Gnance@TechLawInc.com>
Subject FW: duplicate pairs for Twin Cities Iron and Metal Site case number 38123

sorry, forgot the blank:

C0118 and MC0118

lab QC (MS/MSD):

C0120
MC0115
MC0120
MC0123
C0115
C0129
MC0129

Michelle Dallessandro, Project Manager
131 Peninsula Street, Suite B
Wheeling, WV 26003
(304) 830-1444 (mobile)
(304) 230-1230 (office)
(304) 232-5006 (fax)
mdallessandro@techlawinc.com

From: Dallessandro, Michelle
Sent: Thu 08-Jan-09 11:04
To: snyder.judy@epamail.epa.gov
Cc: Nance, Gene
Subject: duplicate pairs for Twin Cities Iron and Metal Site case number 38123

C0121/C0122 (SURFACE WATER)
MC0116/MC0117 (SEDIMENT)
MC0121/MC0122 (SURFACE WATER)
C0116/C0117 (SEDIMENT)
C0132/C0142 (SOIL/SEDIMENT)
MC0132/MC0132 (SOIL/SEDIMENT)
MC0134/MC0141 (SOIL/SEDIMENT)

Michelle Dallessandro, Project Manager
131 Peninsula Street, Suite B
Wheeling, WV 26003
(304) 830-1444 (mobile)
(304) 230-1230 (office)
(304) 232-5006 (fax)
mdallessandro@techlawinc.com

Agnes Huntley [Mitkem]

From: Walsh, Colin [cwalsh20@fedcsc.com]
Sent: Friday, December 12, 2008 3:06 PM
To: Agnes Huntley [Mitkem]
Cc: slizys.dan@epa.gov; Harris.Carroll@epamail.epa.gov; kwedar.john@epa.gov; thaung.khin-cho@epa.gov
Subject: Region 03 | Case 38123 | Lab MITKEM | Issue Multiple | FINAL

Agnes,

This is Sara Gholam; Colin has left the office for the day.

Summary Start
-Insufficient/inappropriate designation of laboratory QC-
Issue: The TR/COC designates 2 soil samples, C0115 and C0129, for laboratory QC of the ARO fraction. The laboratory would like to select sample C0115 for laboratory QC.
Resolution: In accordance with previous direction from Region 3, the laboratory will select one of the designated samples per matrix for laboratory QC. The laboratory will note the issue in the Case/SDG Narrative, notify the SMO coordinator of the sample selected for laboratory QC, and proceed with the analysis of the samples.

SMO will note that the laboratory selected sample C0115 for laboratory QC.

-Discrepancies with tags, jars, and/or TR/COC-
Issue 2: The TR/COC for the soil samples lists the Case as complete, however the TR/COC for the aqueous samples lists the Case as not complete. The shipping information indicates that the Case is complete.
Resolution 2: In accordance with previous direction from Region 3, the Laboratory will complete the Case, note the issue in the Case/SDG Narrative and proceed with the analysis of the samples.
Summary End

Please let me know if you have any questions.

Thank you,

Sara for

Colin G. Walsh
Environmental Coordinator - Region 3
CSC

15000 Conference Center Drive, Chantilly, VA 20151
Civil Division | (p) 703-818-4544 | (f) 703-818-4602 | cwalsh20@fedcsc.com | www.csc.com

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From: Agnes Huntley [Mitkem] [mailto:agnes_ng@mitkem.com]
Sent: Friday, December 12, 2008 2:20 PM
To: Walsh, Colin
Subject: Case 38123

Hi Colin,

I'm missed this issue.

The TR/COC designates soil samples C0115 and C0129 as samples for laboratory QC for Aroclors. Are we to analyze both samples for laboratory QC. If not, we will perform laboratory QC on sample C0115.

Thank you,

Agnes (Ng) Huntley
CLP Project Manager
Mitkem Laboratories
A Division of Spectrum Analytical, Featuring Hanibal Technology
(P) 401-732-3400 x316
(F) 401-732-3499
****

From: Agnes Huntley [Mitkem] [mailto:agnes_ng@mitkem.com]
Sent: Friday, December 12, 2008 2:16 PM
To: Walsh, Colin
Subject: Case 38123

Hi Colin,

The TR/COC for the soil samples lists the case as complete. The TR/COC for the aqueous samples says the case is not complete. Is th case complete

Thank you,

Agnes (Ng) Huntley
CLP Project Manager
Mitkem Laboratories
A Division of Spectrum Analytical, Featuring Hanibal Technology
(P) 401-732-3400 x316
(F) 401-732-3499
****

Appendix D

Laboratory Case Narrative

MITKEM LABORATORIES

A DIVISION OF SPECTRUM ANALYTICAL, INC. Featuring HANIBAL TECHNOLOGY

December 24, 2008

Computer Sciences Corporation
2000 Edmund Halley Drive
Reston, VA 20191-3436

RE: EPA Case # 38123
SDG# C0114
Mitkem Lab Project # G2324

To Document Control Officer:

Enclosed is the data report for the samples associated with the above referenced project. The analyses were performed under USEPA Contract # EP-W-05-030.

Please call if you have any questions regarding the submittal.

Sincerely,

Kin Chin for ARH

Agnes R. Huntley
CLP Project Manager

cc Mr. Dan Slizys, USEPA Region III

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SDG Narrative

Mitkem Laboratories submits the enclosed data package in response to USEPA Case # 38123 and SDG# C0114. Analyses were performed for five aqueous and ten soil samples that were received on December 11, 2008. The analyses were performed under USEPA Contract # EP-W-05-030. Please note that three sample-shipping coolers were received. The coolers were measured at 3°C, 3°C and 2°C.

Samples C0115 and C0129 are both designated as samples for laboratory QC on the TR/COC for the soil samples. Per the Region, the laboratory was to select one for laboratory QC. The laboratory elected to perform laboratory QC on sample C0115.

The TR/COC that lists the soil samples indicated that the case was complete. The TR/COC with the aqueous samples indicated that the case was not complete. Per the Region, the case is complete.

The following samples are submitted in this data package:

Client ID	Lab ID	Analysis
C0114	G2324-01A	A
C0115	G2324-02A	A
C0115DL	G2324-02ADL	A
C0115MS	G2324-02AMS	A
C0115MSD	G2324-02AMSD	A
C0116	G2324-03A	A
C0117	G2324-04A	A
C0125	G2324-05A	A
C0125DL	G2324-05ADL	A
C0127	G2324-06A	A
C0129	G2324-07A	A
C0129DL	G2324-07ADL	A
C0132	G2324-08A	A
C0132DL	G2324-08ADL	A
C0137	G2324-09A	A
C0137DL	G2324-09ADL	A
C0142	G2324-10A	A
C0142DL	G2324-10ADL	A
C0118	G2324-11A	A
C0121	G2324-12A	A
C0122	G2324-13A	A
C0119	G2324-14A	A
C0120	G2324-15A	A
C0120MS	G2324-15AMS	A
C0120MSD	G2324-15AMSD	A

A = Aroclors

The analyses were performed using USEPA CLP Multi-Media, Multi-Concentration (SOM01.2) protocols. The analyses were performed with strict adherence to the SOW with the following exceptions and observations:

1. Overall Observation:

Where needed, manual integrations were performed to improve data quality. The corrections were reviewed and associated hardcopies generated and reported as required. Manual integrations are coded to provide the data reviewer justification for such action. The codes are labeled on the ion chromatogram signal (GC/MS signal) and chromatogram for GC based analysis as follows:

- M1 peak tailing or fronting.
- M2 peak co-elution.
- M3 rising or falling baseline.
- M4 retention time shift.
- M5 miscellaneous – under this category, the justification is explained.
- M6 software did not integrate peak
- M7 partial peak integration

2. Aroclor Analysis

GC column used: 30 m x 0.53 mm id (0.42 um film thickness) CLPPestII and 30 m x 0.53 mm id (0.5 um film thickness) CLPPest megabore columns

The concentration of target analytes were determined using the following equation for aqueous samples:

$$\text{Concentration } (\mu g/L) = \frac{(Amt)(DF)(UF)(V_t)}{(V_o * V_i)}$$

where: Amt = Lower value of two Conc
DF = Dilution Factor
UF = Correction Factor
V_t = Volume of final extract (µL)
V_i = Volume of sample injected (µL)
V_o = Volume of sample extracted (mL)

The following equation was used to calculate the concentration of target analytes for soil samples:

$$\text{Concentration (ug/Kg)} = (\text{Amt})(\text{DF})(\text{Uf})\left(\frac{\text{Vt}}{(\text{Vi} * \text{WS} * \left(\frac{100 - \text{m}}{100}\right)}\right)$$

where: Amt = CAL – AMT on raw data
DF = Dilution factor
UF = ng unit correction factor
WS = Weight of sample extracted (g)
Vt = Volume of final extract (uL)
Vi = Volume injected (uL)
M = %moisture (not decanted)

Surrogate recoveries were within the QC limits with the exception of some surrogates diluted out in samples C0137DL.

Matrix spike and matrix spike duplicate were performed on C0120 for aqueous samples. Spike recoveries and RPD were within the QC limits. Duplicate matrix spikes were performed on C0115 for soil samples. Spike recoveries and replicate RPDs were not within the advisory QC limits. Please note that the spike recoveries and replicate precision outside of QC limits were due to the high concentration of Aroclor 1260 in the native sample.

Lab control samples performed for both the aqueous and soil matrices were within the QC limits.

Sample C0137 was analyzed at 50x dilution. To ensure that all target analytes were determined within the instrument calibration range, the following samples were re-analyzed at dilution: C0115 (5x), C0125 (10x), C0129 (2x), C0132 (2x), C0137 (500x) and C0142 (3x).

GCMS was performed to confirm AR1248 in C0137.

Manual integrations were performed for the following:
M3: AR1016 and AR1260 in AR16601I3 (Front column)
M3: AR1260 in AR16602I3 (Front column)
M5: AR1016 in AR16601J3 (Front column)
M3: AR1254 and AR1260 in C0125 (Front column)

No other unusual observation was made for the analysis.

All of the submittals to the region are originals other than logbook pages. Photocopies of logbook pages are included, with the originals maintained on file at the laboratory. Tunes, calibration verifications and initial calibrations that are shared among several cases are photocopies indicating the location of the originals.

I certify that this Sample Data Package is in compliance with the terms and condition of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy Sample Data Package and in the electronic data deliverable has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Kin Chiu for ARH

Agnes Huntley
CLP Project Manager
12/24/08