



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

DATE : November 19, 2009

SUBJECT: Region III Data QA Review

FROM : Colleen Walling *Colleen K. Walling*
Region III ESAT RPO (3EA20)

TO : Michael Towle
Regional Project Manager (3HS31)

Attached is the inorganic data validation report for the Tank Car Corporation of America site (CASE # 38651; SDG #MC07S0). This report has been 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) 305-2763.

Attachments

cc: Joshua Cope (TTEMI)

TO File #: 0021

TDF#: 11043

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



DATE: November 17, 2009

SUBJECT: Inorganic Data Validation (IM2 Level)
Case: 38651
SDG: MC07S0
Site: Tank Car Corporation of America

FROM: Donald M. Brown^{DMB}
Inorganic Data Reviewer

Mahboobeh Mecanic^{MM}
Senior Oversight Chemist

TO: Colleen Walling
ESAT Region 3 Project Officer

OVERVIEW

Case 38651, Sample Delivery Group (SDG) MC07S0, consisted of four (4) aqueous samples analyzed for total metals by Chemtech Consulting Group (CHEM). The sample set included one (1) field blank and one (1) field duplicate pair. Samples were analyzed in accordance with Contract Laboratory Program (CLP) Statement of Work (SOW) ILM05.4 through the Routine Analytical Services (RAS) program.

SUMMARY

Data were validated according to Region III Modifications to the National Functional Guidelines for Inorganic Data Review, Level IM2. No problems that would impact data usability were noted during the review of this data set. Analytical results for all samples are summarized on a single Data Summary Form (DSF).

NOTES

Reported results between Method Detection Limits (MDLs) and Contract Required Quantitation Limits (CRQLs) were qualified "J" on the DSF.

The matrix spike recovery was high (>125%) for silver (Ag). However, the associated sample results for this analyte were reported as non-detects; therefore, no data were qualified based on this outlier.

Reported results for field duplicate pair MC07S3/MC07S4 were within 20% RPD, \pm CRQL for all analytes.

Data for Case 38651, SDG MC07S0, were reviewed in accordance with the National Functional Guidelines for Evaluating Inorganic Analyses with Modifications for use within Region III.

ATTACHMENTS

INFORMATION REGARDING REPORT CONTENT

APPENDIX A	GLOSSARY OF DATA QUALIFIER CODES
APPENDIX B	DATA SUMMARY FORM(S)
APPENDIX C	CHAIN OF CUSTODY RECORD(S)
APPENDIX D	LABORATORY CASE NARRATIVE(S)

DCN: 38651.MC07S0IM2.doc

Appendix A

Glossary of Data Qualifier Codes

GLOSSARY OF DATA QUALIFIER CODES (INORGANIC)

CODES RELATED TO IDENTIFICATION

(confidence concerning presence or absence of analytes):

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

Q = No analytical result.

Appendix B

Data Summary Forms

DATA SUMMARY FORM: INORGANIC

Case #: 38651

SDG : MC07S0

Number of Soil Samples : 0

Site :

TANK CAR CORPORATION OF AMERICA

Number of Water Samples : 4

Lab. :

CHEM

Sample Number :	MC07S0	MC07S2	MC07S3	MC07S4							
Sampling Location :	TCCA-FB-02	TCCA-SW-02	TCCA-SW-03	TCCA-SW-04							
Field QC :	Field Blank		Dup of MC07S4	Dup of MC07S3							
Matrix :	Water	Water	Water	Water							
Units :	ug/L	ug/L	ug/L	ug/L							
Date Sampled :	10/24/2009	10/24/2009	10/24/2009	10/24/2009							
Time Sampled :	21:45	20:10	19:55	19:59							
Dilution Factor :	1.0	1.0	1.0	1.0							
ANALYTE	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALUMINUM	200			734		1550		1770			
ANTIMONY	60										
*ARSENIC	10			6.2	J	8.9	J	9.2	J		
BARIUM	200			25.1	J	31.2	J	33.4	J		
BERYLLIUM	5										
*CADMIUM	5										
CALCIUM	5000	265	J	19100		19600		19900			
*CHROMIUM	10			3.5	J	7.8	J	9.5	J		
COBALT	50										
COPPER	25			70.5		150		157			
IRON	100			1340		2750		3280			
*LEAD	10			19.2		45.0		51.6			
MAGNESIUM	5000	70.7	J	6030		6250		6330			
MANGANESE	15			32.9		52.2		64.7			
MERCURY	0.2										
*NICKEL	40			4.8	J	10.2	J	11.8	J		
POTASSIUM	5000			3050	J	2850	J	2870	J		
SELENIUM	35										
SILVER	10										
SODIUM	5000	316	J	3370	J	3320	J	2990	J		
THALLIUM	25										
VANADIUM	50										
ZINC	60			101		195		223			

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 Records



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

Case No: 38651

DAS No:

R

Region: Project Code: Account Code: CERCLIS ID: Spill ID: Site Name/State: Project Leader: Action: Sampling Co:	3 CT4593 PAN000306553 AGX TCCA Oct 2009 SW/PA Jordan Vaughn Removal Action Tetra Tech	Date Shipped: 10/26/2009 Carrier Name: FedEx Airbill: 8698 6864 7670 Shipped to: ChemTech Consulting Group (CHEM) 284 Sheffield St. Mountainside NJ 07092 (908) 789-8900	Chain of Custody Record	Sampler Signature: Received By (Date / Time)
Relinquished By	(Date / Time)			
1				
2				
3				
4				

INORGANIC SAMPLE No.	MATRIX SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	ORGANIC SAMPLE No.	QC Type
MC07S0	Surface Water/ Jordan Vaughn	L/G	Met Water (14)	TCCA1000 (HNO3) (1)	TCCA-FB-02	S: 10/24/2009 21:45	C07S0	Field blank
MC07S2	Surface Water/ Jordan Vaughn	L/G	Met Water (14)	TCCA1011 (HNO3), TCCA1012 (HNO3), TCCA1013 (HNO3) (3)	TCCA-SW-02	S: 10/24/2009 20:10	C07S2	-
MC07S3	Surface Water/ Jordan Vaughn	L/G	Met Water (14)	TCCA1023 (HNO3) (1)	TCCA-SW-03	S: 10/24/2009 19:55	C07S3	-
MC07S4	Surface Water/ Jordan Vaughn	L/G	Met Water (14)	TCCA1029 (HNO3) (1)	TCCA-SW-04	S: 10/24/2009 19:59	C07S4	duplicate of TCCA-SW-03

Shipment for Case Complete? Y	Sample(s) to be used for laboratory QC: MC07S2	Additional Sampler Signature(s):	Chain of Custody Seal Number:
Analysis Key: Met Water = Metals + Hg Water - ILM05.4 TCP-AES	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Shipment Iced? _____

TR Number: 3-023200937-102609-0001

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 4200

REGION COPY

U.S. EPA Region III Analytical Request Form

Revision 10.06

873 6-3-09

ASQAB USE ONLY	
RAS#	CT4593
DAS#	Analytical TAT
NSF#	14 DAYS

38651

Date: 6/2/09		Site Activity: Removal Site-Evaluations <i>Assessment</i>	
Site Name: Tank Car Corporation of America		Street Address: 1725 Walnut Ave	
City: Orland	State: PA	Latitude:	Longitude:
Program: Superfund	Acct. #: 2009 T03 N 302DC6C A3GXRS00	CERCLIS #: PAN000 306 553	
Site ID:	Spill ID: A3GX	Operable Unit:	
Site Specific QA Plan Submitted: <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes		Title: START3 QAPP	Date Approved: November 2006
EPA Project Leader: Michael Towle	Phone#: 215-814-3272	Cell Phone #:	E-mail: towle.michael@epa.gov
Request Preparer: JOSHUA COPE	Phone#: 610-364-2130	Cell Phone #:	E-mail: Joshua.cope@ttemi.com
Site Leader: Jordan Vaughn	Phone#: 610-364-2141	Cell Phone #:	E-mail: Jordan.vaughn@ttemi.com
Contractor: Tetra Tech EM Inc			
#Samples 13	Matrix: water	Parameter: TCL VOC	Method: SOM01.2
#Samples 11	Matrix: water	Parameter: TCL SVOC	Method: SOM01.2
#Samples 11	Matrix: water	Parameter: TAL Metals & Hg	Method: ILM05.4 ICPAES & Hg
#Samples 4	Matrix: soil	Parameter: TCL SVOC	Method: SOM01.2
#Samples 6	Matrix: soil	Parameter: TAL Metals & Hg	Method: ILM05.4 ICPAES & Hg
Ship Date From: 6/10/09		Ship Date To: 6/12/09	Inorg. Validation Level IM2
Unvalidated Data Requested: <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes		If Yes, TAT Needed: <input checked="" type="checkbox"/> 14days <input type="checkbox"/> 7days <input type="checkbox"/> 48hrs <input type="checkbox"/> 24hrs <input type="checkbox"/> Other	(Specify) <i>PR's by ESA</i>
Validated Data Package Due: <input type="checkbox"/> 42 days <input checked="" type="checkbox"/> 30 days <input type="checkbox"/> 21days <input type="checkbox"/> 14 days <input type="checkbox"/> Other (Specify)		<i>14/10</i>	
Electronic Data Deliverables Required: <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes (EDDs will be provided in Region 3 EDD Format)			
Special Instructions: See attached Required Limits and CRQL/CRDLs Needed. *Analyze by ILM05.4 ICPAES & Hg. Report results in ug/wipe.			

Appendix D

Laboratory Case Narrative

CHEMTECH
284 Sheffield Street
Mountainside, NJ 07092

SDG NARRATIVE

USEPA
SDG # MC07S0
CASE # 38651
CONTRACT # EPW08065
LAB NAME: CHEMTECH CONSULTING GROUP
LAB CODE: CHEM
CHEMTECH PROJECT # A4853

A. Number of Samples and Date of Receipt

04 Water Samples were delivered to the laboratory intact on 10/27/09

B. Parameters

Test requested for Metals CLP Full & Hg.

C. Cooler Temp

Indicator Bottle: Presence/Absence
Cooler: 4°C

D. Detail Documentation (related to Sample Handling Shipping, Analytical Problem, Temp of Cooler etc):

E. Corrective Action taken for above:

F. Analytical Techniques:

All analyses were based on CLP Methodology by method ILM05.4

G. Calculation:

Calculation example for ICP-AES Water Sample:

Results reported in Ug/L = Results in ppm X 1000 X Dilution Factor (if any) X Fraction of
Sample Amount Taken in ICP Water- Prep

Fraction of Sample Amount Taken in ICP Water- Prep = 100/100 or 50/50 =1
(if 100 ml Initial Volume taken and Final Volume was made to 100 ml or 50 ml Initial Volume

CHEMTECH

**284 Sheffield Street
Mountainside, NJ 07092**

and Final Volume made to 50 ml in ICP-AES Water Digestion procedure)

Calculation example for Hg Water Sample:

Results reported in Ug/L = Results in ppb X Dilution Factor (if any) X Fraction of Sample Amount Taken in Water Hg-Prep.

Fraction of Sample Amount Taken in Water Hg-Prep = $100/100 = 1$
(if 100 ml Initial Volume taken and made it to Final Volume as 100 ml)

H. QA/ QC

Calibrations met requirements. Interference check met requirements. Blank analyses did not indicate any presence of contamination. Laboratory Control sample was within control limits. Spike sample did meet requirements except for Silver. Duplicate sample did meet requirements. Serial Dilution did meet requirements.

I certify that the 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 hard copy data package has been authorized by the Laboratory Director or his designee, as verified by the following signature.

Signature Mildred V. Reyes

Name: Mildred V. Reyes

Date 11/9/09

Title: Document Control Officer

Snehal Mehta

From: Kramer, Caroline [ckramer5@fedcsc.com]
Sent: Tuesday, October 27, 2009 9:45 AM
To: Snehal Mehta
Subject: FW: Case-38651
Attachments: Case-38651-LRD-10-27-09.pdf

Snehal,

Case 38651 was scheduled with CHEM over the summer. This Case was placed on hold, and waiting for a weather event for the final batch of samples. The samples received this morning (4 water samples for ICP-AES TM/Hg) are the final samples for this Case. Please let me know if you have any other questions or if there are any problems with the samples. Thanks,

Caroline L. Kramer
Environmental Coordinator - Region 3
CSC

15000 Conference Center Drive, Chantilly VA 20151
Civil Division | (p) 703-818-4248 | (f) 703-818-4602 | ckramer5@fedcsc.com | www.csc.com

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From: Snehal Mehta [mailto:Snehal@chemtech.net]
Sent: Tuesday, October 27, 2009 9:40 AM
To: Kramer, Caroline
Subject: Case-38651

Caroline,

Samples received for Case-38651. 'CHEM' have not received Scheduling notification for this case.

Thanks,
Snehal Mehta

284 Sheffield Street
Mountainside, NJ 07092
Phone: (908) 789 8900 Ext: 3158
Direct Line: (908) -728-3158
Fax: (908) 789 8922
www.chemtech.net

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