



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
Environmental Sciences Center
701 Mapes Road
Fort Meade, Maryland 20755-5350

DATE : January 29, 2009

SUBJECT: Region III Data QA Review

FROM : Khin-Cho Thaung *KCT*
Region III ESAT RPO (3EA21)

TO : Robert Kelly
Regional Project Manager (3HS32)

Attached is the inorganic data validation report for the Twin City Metal and Iron Company Site (Case #: 38123; SDG#: MC0114, MC0118) 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, Inc.)

TO File #: 0014 TDF#: 01007

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

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Date: January 13, 2009

Subject: Inorganic Data Validation (IM2 Level)
Case: 38123
SDGs : MC0114, MC0118
Site : Twin City Metal and Iron Company, Inc.

From: Kurt Roby *KR*
Inorganic Data Reviewer

MB Mahboobeh Mecanic *MB*
Senior Oversight Chemist

To: Khin-Cho Thaung
ESAT Region 3 Project Officer

OVERVIEW

Case 38123, Sample Delivery Groups (SDGs) MC0114 and MC0118, consisted of twenty-four (24) soil samples and one (1) field blank analyzed for total metals by ICP-AES and for mercury (Hg) by cold vapor technique. The sample set included three (3) field duplicate pairs. Samples were analyzed by ChemTech Consulting Group (CHEM) according to 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. Areas of concern with respect to data usability are listed below.

Data in this case have been impacted by outliers present in field and laboratory blanks as well as ICP serial dilution and matrix spike analyses. Details of these outliers are discussed under "Minor Problems," specific samples affected are outlined in "Table 1A" and qualified analytical results for all samples are summarized on the Data Summary Forms (DSFs).

MINOR PROBLEMS

Continuing calibration (CCB) and field (FB) blanks had reported results greater than the Method Detection Limits (MDLs) for the analytes listed below. Positive results for these analytes in affected samples which are less than five times (<5X) the blank concentrations may be biased high and have been qualified "B" on the DSFs.

<u>SDG</u>	<u>Blank</u>	<u>Affected Analytes</u>
MC0114	FB	Sodium (Na)
MC0118	CCB	Aluminum (Al), iron (Fe), magnesium (Mg), potassium (K), thallium (Tl)
	FB	Na

Percent differences (%Ds) in the ICP serial dilution analyses were outside the control limit (>10%) for the analytes listed below. Positive results for these analytes in affected samples are estimated due to possible matrix interferences and have been qualified "J" on the DSFs.

<u>SDG</u>	<u>Analyte(s)</u>
MC0114	Al, chromium (Cr), cobalt (Co), copper (Cu), lead (Pb), nickel (Ni), zinc (Zn)
MC0118	Al, Co, Cu, Pb, Zn

Matrix spike recoveries were low (<75% but >30%) for silver (Ag) in both SDGs. Low recoveries may be attributed to matrix interferences or analyte lost during the digestion process. Positive results for Ag in affected samples may be biased low and are qualified "L" unless superseded by "J" on the DSFs. Quantitation limits for Ag in affected samples may be biased low and have been qualified "UL" on the DSFs.

NOTES

The concentration of several analytes exceeded the calibration range in the initial analysis for the samples listed below. These samples were re-analyzed to bring the concentration of the analytes within the calibration range. Results for these analytes were reported from the diluted analyses and annotated with (+) or (++) symbols on the DSFs by the reviewer.

<u>Sample(s)</u>	<u>Dilution</u>	<u>Analyte(s)</u>
MC0125, MC0131, MC0138, MC0139	4X	Fe
MC0136	10X	Fe, Pb
MC0137	4X	Al, calcium (Ca), Fe
MC0125, MC0126, MC0140	10X	Pb
MC0124	10X	Fe

Reported results between MDLs and Contract Required Quantitation Limits (CRQLs) were qualified "J" unless superseded by "B" on the DSFs.

Reported results for field duplicate pairs MC0116/MC0117, MC0132/MC0142 and MC0134/MC0141 were within 35% RPD, $\pm 2 \times \text{CRQL}$ for all analytes except the following:

MC0116/MC0117	Ca, manganese (Mn)
MC0132/MC0142	Ca, Pb, Mg
MC0134/MC0141	Arsenic (As), chromium (Cr), Fe

Data for Case 38123, SDGs MC0114 and MC0118, 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

Table 1A is a summary of qualifiers applied to the laboratory-generated results during data validation.

Table 1A	Summary of qualifiers on data summary forms after data validation
Table 1B	Codes used in comments column of Table 1A
Appendix A	Glossary of Data Qualifier Codes
Appendix B	Data Summary Form(s)
Appendix C	Chain of Custody Records
Appendix D	Laboratory Case Narrative

DCN: 38123_MC0114_118

TABLE 1A
SUMMARY OF QUALIFIERS ON DATA SUMMARY
FORM AFTER DATA VALIDATION

Case 38123, SDG MC0114

<u>ANALYTE</u>	<u>SAMPLES AFFECTED</u>	<u>POSITIVE VALUES</u>	<u>NON- DETECTED VALUES</u>	<u>BIAS</u>	<u>COMMENTS*</u>
Al	All samples	J			ISD (12%)
Cr	All samples	J			ISD (11%)
Co	All samples	J			ISD (19%)
Cu	All samples	J			ISD (17%)
Pb	All samples	J			ISD (21%)
Ni	All samples	j			ISD (16%)
Ag	All samples except MC0134, MC0137, MC0138, MC0139, MC0141, MC0142	L	UL	Low	MSL (41%)
	MC0134, MC0137, MC0138, MC0139, MC0141, MC0142	J			>MDL<CRQL MSL (41%)
Na	All samples except MC0137	B		High	FB (511 J ug/L)
Zn	All samples	J			ISD (18%)

* See explanation of comments in Table 1B

TABLE 1A
SUMMARY OF QUALIFIERS ON DATA SUMMARY
FORM AFTER DATA VALIDATION

Case 38123, SDG MC0118

<u>ANALYTE</u>	<u>SAMPLES AFFECTED</u>	<u>POSITIVE VALUES</u>	<u>NON- DETECTED VALUES</u>	<u>BIAS</u>	<u>COMMENTS*</u>
Al	MC0123, MC0124, MC0125, MC0126	J			ISD (11%)
	MC0118	B		High	CCB (46.555 J ug/L)
Co	MC0123, MC0124, MC0125, MC0126	J			ISD (11%)
Cu	MC0123, MC0124, MC0125, MC0126	J			ISD (14%)
Fe	MC0118	B		High	CCB (52.320 J ug/L)
Pb	MC0123, MC0124, MC0125, MC0126	J			ISD (18%)
Mg	MC0118	B		High	CCB (74.245 J ug/L)
Ag	MC0123, MC0124, MC0125, MC0126	L	UL	Low	MSL (42%)
K	MC0118	B		High	CCB (70.415 J ug/L)
Na	MC0123, MC0124, MC0125, MC0126	B		High	FB (511 J ug/L)
Tl	MC0124	B		High	CCB (2.415 J ug/L)
Zn	MC0123, MC0124, MC0125, MC0126	J			ISD (17%)

* See explanation of comments in Table 1B

TABLE 1B
CODES USED IN COMMENTS COLUMN

ISD	=	Percent differences (%Ds) in the ICP serial dilution analysis were outside the control limit (>10%) [%Ds are in parenthesis]. Positive results are estimated.
MSL	=	Matrix spike recoveries were low (<75% but >30%) [percent recoveries are in parenthesis]. Positive results and quantitation limits may be biased low.
>MDL<CRQL	=	Reported results are greater than MDL but less than CRQL and are considered estimated.
FB	=	Field blank had a result >MDL [result is in parenthesis]. Positive results which are <5X the blank concentration may be biased high.
CCB	=	Continuing calibration blanks had results >MDLs [results are in parenthesis]. Positive results which are <5X the blank concentrations may be biased high.

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

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

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Case #: 38123

SDG : MC0114

Number of Soil Samples : 20

Site :

TWIN CITY IRON & METAL CO INC

Number of Water Samples : 0

Lab. :

CHEM

Sample Number :		MC0114		MC0115		MC0116		MC0117		MC0127	
Sampling Location :		SD01		SD02		SD03		SD04		SS09	
Field QC :						Dup. of MC0117		Dup. of MC0116			
Matrix :		Soil		Soil		Soil		Soil		Soil	
Units :		mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/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		15:43	
%Solids :		74.5		71.5		87.1		88.0		58.2	
Dilution Factor :		1.0		1.0		1.0		1.0		1.0	
ANALYTE	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALUMINUM	20	8420	J	6730	J	3860	J	4380	J	6290	J
ANTIMONY	6			3.2	J					2.4	J
ARSENIC	1	6.8		8.6		5.1		4.2		8.4	
BARIUM	20	113		430		223		181		484	
BERYLLIUM	0.5	0.92		0.70		0.44	J	0.51	J	0.69	J
CADMIUM	0.5	0.41	J	5.1		0.42	J	0.37	J	0.87	
CALCIUM	500	11700		41800		57200		33800		51100	
CHROMIUM	1	18.5	J	20.3	J	15.5	J	17.2	J	19.2	J
COBALT	5	12.7	J	9.1	J	6.2	J	7.5	J	5.7	J
COPPER	2.5	8.3	J	161	J	14.1	J	15.5	J	24.3	J
IRON	10	17100		18800		14600		11600		24400	
*LEAD	1	28.6	J	677	J	23.4	J	21.5	J	214	J
MAGNESIUM	500	4560		3070		2650		2620		4180	
MANGANESE	1.5	2190		401		511		327		239	
MERCURY	0.1			0.081	J	0.067	J			0.076	J
NICKEL	4	6.7	J	13.8	J	5.4	J	5.6	J	9.4	J
POTASSIUM	500	367	J	440	J	263	J	305	J	705	J
SELENIUM	3.5										
SILVER	1		UL		UL		UL		UL		UL
SODIUM	500	104	B	124	B	55.6	B	57.9	B	413	B
THALLIUM	2.5										
VANADIUM	5	29.3		20.3		18.3		18.2		23.3	
ZINC	6	22.9	J	202	J	60.8	J	45.0	J	291	J

CRQL = Contract Required Quantitation Limit

SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits: (CRQL * Dilution Factor) / (%Solids/ 100)

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DATA SUMMARY FORM: INORGANIC

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Case #: 38123

SDG : MC0114

Site :

TWIN CITY IRON & METAL CO INC.

Lab. :

CHEM

Sample Number :		MC0128		MC0129		MC0130		MC0131		MC0132	
Sampling Location :		SS13		SS14		SS15		SS16		SS17	
Field QC :										Dup. of MC0142	
Matrix :		Soil		Soil		Soil		Soil		Soil	
Units :		mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg	
Date Sampled :		12/9/2008		12/9/2008		12/9/2008		12/9/2008		12/9/2008	
Time Sampled :		15:33		15:26		15:31		15:20		15:08	
%Solids :		77.9		80.4		67.2		67.7		85.6	
Dilution Factor :		1.0		1.0		1.0		1.0 / 4.0		1.0	
ANALYTE	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALUMINUM	20	8150	J	6550	J	6390	J	20800	J	4680	J
ANTIMONY	6	5.4	J	2.9	J	1.9	J	26.5		7.9	
ARSENIC	1	11.7		10.1		8.4		32.2		10.1	
BARIUM	20	364		343		329		975		147	
BERYLLIUM	0.5	0.95		0.87		0.74	J	0.27	J	0.51	J
CADMIUM	0.5	1.4		1.2		1.2		164		2.0	
CALCIUM	500	14200		50800		28200		9480		32600	
CHROMIUM	1	34.2	J	37.4	J	27.1	J	110	J	38.6	J
COBALT	5	14.5	J	12.2	J	14.0	J	18.7	J	10.7	J
COPPER	2.5	47.8	J	36.5	J	33.3	J	3600	J	83.4	J
IRON	10	30600		23200		20400		151000 +		26700	
*LEAD	1	1260	J	554	J	317	J	5920	J	1680	J
MAGNESIUM	500	1940		4260		3370		7170		7320	
MANGANESE	1.5	867		598		561		1610		470	
MERCURY	0.1	0.11	J	0.11	J	0.12	J	1.1		0.12	
NICKEL	4	14.8	J	10.1	J	10.4	J	107	J	10.4	J
POTASSIUM	500	799		577	J	730	J	1110		388	J
SELENIUM	3.5										
SILVER	1		UL		UL		UL	5.6	L		UL
SODIUM	500	77.4	B	76.0	B	62.6	B	172	B	68.2	B
THALLIUM	2.5										
VANADIUM	5	38.9		34.5		27.8		37.9		25.8	
ZINC	6	236	J	83.9	J	102	J	1770	J	156	J

CRQL = Contract Required Quantitation Limit

SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits: (CRQL * Dilution Factor) / (%Solids/ 100)

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"+" = Result reported from the diluted analysis.

DATA SUMMARY FORM: INORGANIC

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Case #: 38123

SDG : MC0114

Site :

TWIN CITY IRON & METAL CO INC

Lab. :

CHEM

Sample Number :		MC0133		MC0134		MC0135		MC0136		MC0137	
Sampling Location :		SS18		SS19		SS25		SS29		SS31	
Field QC :				Dup. of MC0141							
Matrix :		Soil		Soil		Soil		Soil		Soil	
Units :		mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg	
Date Sampled :		12/9/2008		12/9/2008		12/9/2008		12/9/2008		12/9/2008	
Time Sampled :		15:23		15:03		14:58		14:32		14:39	
%Solids :		75.2		63.3		63.0		78.7		69.5	
Dilution Factor :		1.0		1.0		1.0		1.0 / 10		1.0 / 4.0	
ANALYTE	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALUMINUM	20	9570	J	9830	J	12400	J	6490	J	126000 +	J
ANTIMONY	6	6.5	J	7.7	J	21.4		751		29.1	
ARSENIC	1	15.9		15.1		33.8		70.6		20.4	
BARIUM	20	386		316		520		170		330	
BERYLLIUM	0.5	0.83		0.77	J	0.52	J	0.15	J	0.45	J
CADMIUM	0.5	9.2		8.9		15.6		11.0		39.5	
CALCIUM	500	26800		42300		51800		7050		173000 +	
CHROMIUM	1	44.4	J	32.0	J	141	J	88.4	J	103	J
COBALT	5	13.2	J	29.4	J	20.1	J	13.0	J	19.1	J
COPPER	2.5	266	J	146	J	1050	J	827	J	442	J
IRON	10	38900		33600		78800		169000 +		112000 +	
*LEAD	1	1570	J	1120	J	1520	J	149000 +	J	5440	J
MAGNESIUM	500	3230		3020		11400		2250		6010	
MANGANESE	1.5	1090		371		1020		956		843	
MERCURY	0.1	0.20		0.45		3.8		1.1		6.5	
NICKEL	4	19.8	J	23.3	J	137	J	71.2	J	72.5	J
POTASSIUM	500	698		934		1240		456	J	471	J
SELENIUM	3.5										
SILVER	1		UL	0.21	J	2.4	L	3.8	L	0.28	J
SODIUM	500	73.6	B	125	B	184	B	68.4	B	498	J
THALLIUM	2.5										
VANADIUM	5	41.9		36.2		33.4		25.8		15.3	
ZINC	6	313	J	415	J	2590	J	652	J	3410	J

CRQL = Contract Required Quantitation Limit

SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits: (CRQL * Dilution Factor) / (%Solids/ 100)

Revised 09/99

"+" = Result reported from the diluted analysis.

DATA SUMMARY FORM: INORGANIC

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Case #: 38123

SDG : MC0114

Site :

TWIN CITY IRON & METAL CO INC

Lab. :

CHEM

Sample Number :		MC0138		MC0139		MC0140		MC0141		MC0142	
Sampling Location :		SS32		SS33		SS34		SS59		SS67	
Field QC :								Dup. of MC0134		Dup. of MC0132	
Matrix :		Soil		Soil		Soil		Soil		Soil	
Units :		mg/Kg		mg/Kg		mg/Kg		mg/Kg		mg/Kg	
Date Sampled :		12/9/2008		12/9/2008		12/9/2008		12/9/2008		12/9/2008	
Time Sampled :		14:48		15:16		15:55		15:06		15:10	
%Solids :		62.9		72.0		63.5		61.2		87.1	
Dilution Factor :		1.0 / 4.0		1.0 / 4.0		1.0 / 10		1.0		1.0	
ANALYTE	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALUMINUM	20	5780	J	10300	J	8410	J	10300	J	5720	J
ANTIMONY	6	37.5		98.5		657		10.1		10.8	
ARSENIC	1	32.6		39.9		139		23.1		12.9	
BARIUM	20	482		462		254		317		151	
BERYLLIUM	0.5	0.22	J	0.44	J	0.96		0.99		0.54	J
CADMIUM	0.5	75.9		14.5		13.4		10.9		2.8	
CALCIUM	500	38900		20700		4080		46700		76100	
CHROMIUM	1	106	J	142	J	224	J	56.5	J	36.9	J
COBALT	5	19.4	J	15.1	J	10.8	J	36.6	J	9.7	J
COPPER	2.5	646	J	1170	J	1880	J	150	J	110	J
IRON	10	145000 +		134000 +		67600		53300		33800	
*LEAD	1	11400	J	17200	J	124000 +	J	1330	J	2420	J
MAGNESIUM	500	2700		4340		1410		3280		22000	
MANGANESE	1.5	1080		1250		759		524		486	
MERCURY	0.1	0.57		0.82		1.2		0.52		0.15	
NICKEL	4	106	J	87.5	J	76.7	J	25.6	J	12.5	J
POTASSIUM	500	651	J	877		732	J	905		999	
SELENIUM	3.5					4.4	J				
SILVER	1	0.73	J	0.72	J	4.2	L	0.32	J	0.21	J
SODIUM	500	108	B	87.6	B	140	B	121	B	90.1	B
THALLIUM	2.5										
VANADIUM	5	24.3		36.4		38.0		51.0		33.1	
ZINC	6	850	J	2570	J	1590	J	523	J	137	J

CRQL = Contract Required Quantitation Limit

SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits: (CRQL * Dilution Factor) / (%Solids/ 100)

Revised 09/99

"+" = Result reported from the diluted analysis.

DATA SUMMARY FORM: INORGANIC

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Case #: 38123

SDG : MC0118

Number of Soil Samples : 4

Site :

TWIN CITY IRON & METAL CO INC

Number of Water Samples : 1

Lab. :

CHEM

Sample Number :		MC0123		MC0124		MC0125		MC0126			
Sampling Location :		SS100		SS02		SS06		SS08			
Matrix :		Soil		Soil		Soil		Soil			
Units :		mg/Kg		mg/Kg		mg/Kg		mg/Kg			
Date Sampled :		12/9/2008		12/9/2008		12/9/2008		12/9/2008			
Time Sampled :		16:22		16:11		16:05		15:48			
%Solids :		73.9		68.3		66.8		65.2			
Dilution Factor :		1.0		1.0 / 10		1.0 / 4.0 / 10		1.0 / 10			
ANALYTE	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALUMINUM	20	7530	J	1750	J	25300	J	44200	J		
ANTIMONY	6	1.2	J	68.0		696		672			
ARSENIC	1	6.6		665		240		250			
BARIUM	20	279		95.3		309		304			
BERYLLIUM	0.5	0.66	J			0.41	J	1.1			
CADMIUM	0.5	0.92		79.7		24.0		34.4			
CALCIUM	500	21400		6190		18600		4650			
CHROMIUM	1	17.6		272		200		139			
COBALT	5	8.0	J	24.1	J	10.7	J	11.9	J		
COPPER	2.5	31.3	J	464	J	2540	J	3030	J		
IRON	10	18000		420000 +		125000 +		72600			
*LEAD	1	281	J	4630	J	122000 ++	J	116000 +	J		
MAGNESIUM	500	7240		903		1790		1310			
MANGANESE	1.5	440		1960		1010		739			
MERCURY	0.1	0.075	J	0.99		1.3		1.4			
NICKEL	4	7.0		209		86.0		80.2			
POTASSIUM	500	624	J	325	J	727	J	744	J		
SELENIUM	3.5					5.5		13.0			
SILVER	1		UL		UL	4.0	L	2.9	L		
SODIUM	500	178	B	121	B	152	B	149	B		
THALLIUM	2.5			1.1	B						
VANADIUM	5	32.0		15.6		20.0		24.6			
ZINC	6	67.4	J	2560	J	2630	J	1800	J		

CRQL = Contract Required Quantitation Limit

SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits: (CRQL * Dilution Factor) / (%Solids/ 100)

Revised 09/99

"+" = Result reported from the diluted analysis

"++" = Result reported from the further diluted analysis

DATA SUMMARY FORM: INORGANIC

Page 6 of 6

Case #: 38123

SDG : MC0118

Site :

TWIN CITY IRON & METAL CO INC

Lab. :

CHEM

Sample Number :		MC0118									
Sampling Location :		FB-01									
Field QC :		Field Blank									
Matrix :		Water									
Units :		ug/L									
Date Sampled :		12/9/2008									
Time Sampled :		14:11									
Dilution Factor :		1.0									
ANALYTE	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
ALUMINUM	200	13.8	B								
ANTIMONY	60										
*ARSENIC	10										
BARIUM	200										
BERYLLIUM	5										
*CADMIUM	5										
CALCIUM	5000	1900	J								
*CHROMIUM	10										
COBALT	50										
COPPER	25	2.4	J								
IRON	100	49.3	B								
*LEAD	10										
MAGNESIUM	5000	102	B								
MANGANESE	15	1.6	J								
MERCURY	0.2										
*NICKEL	40										
POTASSIUM	5000	139	B								
SELENIUM	35										
SILVER	10										
SODIUM	5000	511	J								
THALLIUM	25										
VANADIUM	50										
ZINC	60	5.0	J								

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: 38123

DAS No:

R

Region: 3	Date Shipped: 12/10/2008	Carrier Name: FedEx	Shipped to: ChemTech Consulting Group (CHEMED) 284 Sheffield Street Mountainside NJ 07092 (908) 789-8900
Project Code: CT4433	Carrier Name: FedEx	Shipped to: ChemTech Consulting Group (CHEMED) 284 Sheffield Street Mountainside NJ 07092 (908) 789-8900	
Account Code: 2009T03N302DC03ENRS00	Carrier Name: FedEx	Shipped to: ChemTech Consulting Group (CHEMED) 284 Sheffield Street Mountainside NJ 07092 (908) 789-8900	
CERCLIS ID: VAD034557579	Carrier Name: FedEx	Shipped to: ChemTech Consulting Group (CHEMED) 284 Sheffield Street Mountainside NJ 07092 (908) 789-8900	
Spill ID: EN	Carrier Name: FedEx	Shipped to: ChemTech Consulting Group (CHEMED) 284 Sheffield Street Mountainside NJ 07092 (908) 789-8900	
Site Name/State: Twin Cliffs Iron and Metal/VA	Carrier Name: FedEx	Shipped to: ChemTech Consulting Group (CHEMED) 284 Sheffield Street Mountainside NJ 07092 (908) 789-8900	
Project Leader: Michelle Dallessandro	Carrier Name: FedEx	Shipped to: ChemTech Consulting Group (CHEMED) 284 Sheffield Street Mountainside NJ 07092 (908) 789-8900	
Action: Removal Action	Carrier Name: FedEx	Shipped to: ChemTech Consulting Group (CHEMED) 284 Sheffield Street Mountainside NJ 07092 (908) 789-8900	
Sampling Co: TechLaw, Inc.	Carrier Name: FedEx	Shipped to: ChemTech Consulting Group (CHEMED) 284 Sheffield Street Mountainside NJ 07092 (908) 789-8900	

INORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSES/ TURBIDITY	TAGS/ PRESERVATIVE/ BOTTLES	STATION LOCATION	SAMPLE COLLECT DATE/TIME	ORGANIC SAMPLE No.	QC Type
MC0123	Soil/Sediment/ Gene Nance	L/G	Metals (S) (14)	738 (Ice Only) (1)	SS100	S: 12/9/2008 16:22		Lab QC
MC0124	Soil/Sediment/ Gene Nance	L/G	Metals (S) (14)	739 (Ice Only) (1)	SS02	S: 12/9/2008 16:11		-
MC0125	Soil/Sediment/ Gene Nance	L/G	Metals (S) (14)	741 (Ice Only) (1)	SS06	S: 12/9/2008 16:05		-
MC0126	Soil/Sediment/ Gene Nance	L/G	Metals (S) (14)	742 (Ice Only) (1)	SS08	S: 12/9/2008 15:48		-
MC0127	Soil/Sediment/ Gene Nance	L/G	Metals (S) (14)	744 (Ice Only) (1)	SS09	S: 12/9/2008 15:43		-
MC0128	Soil/Sediment/ Gene Nance	L/G	Metals (S) (14)	746 (Ice Only) (1)	SS13	S: 12/9/2008 15:33		-

Shipment for Case # Complete 7 N	Sample(s) to be used for laboratory QC: MC0123	Additional Sampler Signatures(s):	Chain of Custody Seal Number:
Analysts Key: Metals (S) = Hg, ICP Metals by TCP-AES	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Shipment Issued?



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

Case No: 38123

DAS No:

R

Region: 3	Date Shipped: 12/10/2008	Station Location: SD01
Project Code: CT4433	Carrier Name: FedEx	Sample Collect Date/Time: 10:09
Account Code: 2009T03N30ZDC6C03ENRSD0	Airbill: 8663 7154 8711	Organic Sample No.:
CERCLIS ID: VAD034557579	Shipped to: ChemTech Consulting Group (CHEMED)	QC Type: Lab QC
Spill ID: EN		
Site Name/State: Twin Cities Iron and Metal/VA		
Project Leader: Michelle Dellessandro		
Action: Removal Action		
Sampling Co: TechLaw, Inc.		

INORGANIC SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNOVER	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	ORGANIC SAMPLE No.	QC Type
MC0114	Sediment/ Gene Nance	L/G	Metals (S) (14)	697 (Ice Only) (1)	SD01	S: 12/9/2008 10:09		
MC0115	Sediment/ Gene Nance	L/G	Metals (S) (14)	698 (Ice Only) (1)	SD02	S: 12/9/2008 10:33		Lab QC
MC0116	Sediment/ Gene Nance	L/G	Metals (S) (14)	701 (Ice Only) (1)	SD03	S: 12/9/2008 11:10		
MC0117	Sediment/ Gene Nance	L/G	Metals (S) (14)	703 (Ice Only) (1)	SD04	S: 12/9/2008 11:15		Field Duplicate of SD03
MC0118	Surface Water/ Gene Nance	L/G	Metals (W) (14)	717 (HNO3) (1)	FB-01	S: 12/9/2008 14:11		Field Blank
MC0119	Surface Water/ Gene Nance	L/G	Metals (W) (14)	718 (HNO3) (1)	SW01	S: 12/9/2008 10:04		Lab QC
MC0120	Surface Water/ Gene Nance	L/G	Metals (W) (14)	719 (HNO3), 720 (HNO3), 721 (HNO3) (3)	SW02	S: 12/9/2008 10:22		
MC0121	Surface Water/ Gene Nance	L/G	Metals (W) (14)	730 (HNO3) (1)	SW03	S: 12/9/2008 10:55		
MC0122	Surface Water/ Gene Nance	L/G	Metals (W) (14)	733 (HNO3) (1)	SW04	S: 12/9/2008 11:00		Field Duplicate of SW03

Shipment for Case Complete? N	Sent, to be used for laboratory QC: MC0115, MC0120	Additional Sampler Signature(s):	Chain of Custody Seal Number:
Analysis Key: Metals (S) = Hg, ICP Metals by ICP-AES, Metals (W) = Hg, ICP Metals by ICP-AES/MS/CA Fe Pb Mg K Na Cu Zn Cd Pb	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Shipment Iced? _____

IR Number: 3-532217917-121008-0003

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

USEPA Contract Laboratory Program

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P2/51.043 Page 1 of 1



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

Case No: 38123
DAS No: R

Region: 3	Date Shipped: 12/10/2008	Carrier Name: FedEx	Shipped to: ChemTech Consulting Group (CHEMED) 284 Sheffield Street Mountainside NJ 07092 (908) 789-8900
Project Code: CT4433	Carrier Name: 8883 7154 9789		
Account Code: 2009T03N302D08C03ENRS00	Altrill:		
CERCLIS ID: VAD034557579			
Spill ID: EM			
Site Name/State: Twin Cities Iron and Metal/VA			
Project Leader: Michelle Dallessandro			
Action: Removal Action			
Sampling Co: TechLaw, Inc.			

INORGANIC SAMPLE NO.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No/ PRESERVE TIME/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	ORGANIC SAMPLE No.	QC Type
MC0129	Soil/Sediment/ Gene Nance	L/G	Metals (S) (14)	748 (Ice Only) (1)	SS14	S: 12/9/2008 15:26		Lab QC
MC0130	Soil/Sediment/ Gene Nance	L/G	Metals (S) (14)	749 (Ice Only) (1)	SS15	S: 12/9/2008 15:31		
MC0131	Soil/Sediment/ Gene Nance	L/G	Metals (S) (14)	750 (Ice Only) (1)	SS16	S: 12/9/2008 15:20		
MC0132	Soil/Sediment/ Gene Nance	L/G	Metals (S) (14)	752 (Ice Only) (1)	SS17	S: 12/9/2008 15:08		
MC0133	Soil/Sediment/ Gene Nance	L/G	Metals (S) (14)	753 (Ice Only) (1)	SS18	S: 12/9/2008 15:23		
MC0134	Soil/Sediment/ Gene Nance	L/G	Metals (S) (14)	754 (Ice Only) (1)	SS19	S: 12/9/2008 15:03		
MC0135	Soil/Sediment/ Gene Nance	L/G	Metals (S) (14)	755 (Ice Only) (1)	SS25	S: 12/9/2008 14:56		
MC0136	Soil/Sediment/ Gene Nance	L/G	Metals (S) (14)	756 (Ice Only) (1)	SS29	S: 12/9/2008 14:32		
MC0137	Soil/Sediment/ Gene Nance	L/G	Metals (S) (14)	758 (Ice Only) (1)	SS31	S: 12/9/2008 14:39		
MC0138	Soil/Sediment/ Gene Nance	L/G	Metals (S) (14)	759 (Ice Only) (1)	SS32	S: 12/9/2008 14:48		
MC0139	Soil/Sediment/ Gene Nance	L/G	Metals (S) (14)	760 (Ice Only) (1)	SS33	S: 12/9/2008 15:16		

Shipment for Case Complete? Y	Sample(s) to be used for laboratory QC: MC0129	Additional Sampler Signature(s):	Chain of Custody Seal Number:
Analysis Key: Metals (S) = Hg, ICP Metals by ICP-AES	Concentration: L = Low, M = Low/Medium, H = High	Type/Designator: Composite = C, Grab = G	Shipment Used? _____

TR Number: 3-532217917-121008-0006
PR provides preliminary results. Requests for preliminary results will increase analytical costs.
2000 Edmund Halley Dr., Reston, VA 20191-3400 Phone 703/294-9348 Fax 703/264-9222
FWS/1.049 Page 1 of 2

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

Case No: 38123

DAS No:

R

Region: 3		Date Shipped: 12/10/2008	
Project Code: CT4433		Carrier Name: FedEx	
Account Code: 2005T03N302D08C03ENRS00		Airbill: 8883 7154 8798	
CERCLIS ID: VAD034557579		Shipped to: ChemTech Consulting	
Split ID: EN		284 Sheffield Street	
Site Name/State: Twin Cities Iron and Metal/VA		Mountainside NJ 07092	
Project Leader: Michelle D'Allesandro		(908) 788-8900	
Action: Removal Action			
Sampling Co: TechLaw, Inc.			

Chain of Custody Record	
Relinquished By	Received By
1 <i>Shen</i> 12-10-08 / 11:00	
2	
3	
4	

INORGANIC SAMPLE No.	MATRIX SAMPLER	CONC/ TYPE	ANALYSIS/ TURNOVER	TAG No/ PRESERVATIVE/ BODIES	STATION LOCATION	SAMPLE COLLECT DATE/TIME	ORGANIC SAMPLE No.	QC Type
MC0140	Soli/Sediment/ Gene Nance	L/G	Metals (S) (14)	761 (Ice Only) (1)	SS34	S: 12/9/2008 15:56		
MC0141	Soli/Sediment/ Gene Nance	L/G	Metals (S) (14)	762 (Ice Only) (1)	SS59	S: 12/9/2008 15:06		Field Duplicate of SS19
MC0142	Soli/Sediment/ Gene Nance	L/G	Metals (S) (14)	764 (Ice Only) (1)	SS67	S: 12/9/2008 15:10		Field Duplicate of SS17

Shipment for Case Completed?	Sample(s) to be used for laboratory QC: MC0129	Additional Sampler Signature(s):	Chain of Custody Seal Number:
Analysis Key: Metals (S) = Hg, ICP Metals by ICP-AES	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Shipment Used?

IR Number: 3-532217917-121008-0006

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

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Page 2 of 2

U.S. EPA Region III Analytical Request Form

Revision 10.06

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

38123

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: <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes		Title: Sampling QA/QC Work Plan	
EPA Project Leader: Robert F. Kelly		Phone#: 215-814-3268	Cell Phone #: 215-266-7456
Request Preparer: Gene Nance		Phone#: 740-867-0968	Cell Phone #: 304-830-1442
Site Leader: Michelle Dallessandro		Phone#: 304-230-1230	Cell Phone #: 304-830-1444
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
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) 14/16	
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)			
Electronic Data Deliverables Required: <input type="checkbox"/> No <input checked="" type="checkbox"/> 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.			

"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>

bcc

Subject FW: duplicate pairs for Twin Cities Iron and Metal Site case number 38123

History: This message has been forwarded.

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

"Dallessandro, Michelle"
<Mdallessandro@TechLawInc.com>

01/08/2009 11:04 AM


To Judy Snyder/ESC/R3/USEPA/US@EPA

cc "Nance, Gene" <Gnance@TechLawInc.com>

bcc

Subject duplicate pairs for Twin Cities Iron and Metal Site case
number 38123

History:

 This message has been forwarded.

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

Appendix D

Laboratory Case Narrative

SDG MC0114

USEPA - CLP

COVER PAGE

Lab Name CHEMTECH CONSULTING GROUP Contract: EPW08065Lab Code: CHEM Case No.: 38123 NRAS No.: _____ SDG No.: MC0114SOW No.: ILM05.4

EPA Sample No.	Lab Sample ID
<u>MC0114</u>	<u>Z5830-17</u>
<u>MC0115</u>	<u>Z5830-18</u>
<u>MC0116</u>	<u>Z5830-19</u>
<u>MC0117</u>	<u>Z5830-20</u>
<u>MC0127</u>	<u>Z5830-21</u>
<u>MC0128</u>	<u>Z5830-22</u>
<u>MC0129</u>	<u>Z5830-01</u>
<u>MC0129D</u>	<u>Z5830-02</u>
<u>MC0129S</u>	<u>Z5830-03</u>
<u>MC0130</u>	<u>Z5830-04</u>
<u>MC0131</u>	<u>Z5830-05</u>
<u>MC0132</u>	<u>Z5830-06</u>
<u>MC0133</u>	<u>Z5830-07</u>
<u>MC0134</u>	<u>Z5830-08</u>
<u>MC0135</u>	<u>Z5830-09</u>
<u>MC0136</u>	<u>Z5830-10</u>
<u>MC0137</u>	<u>Z5830-11</u>
<u>MC0138</u>	<u>Z5830-12</u>
<u>MC0139</u>	<u>Z5830-13</u>
<u>MC0140</u>	<u>Z5830-14</u>
<u>MC0141</u>	<u>Z5830-15</u>
<u>MC0142</u>	<u>Z5830-16</u>

		ICP-AES	ICP-MS
Were ICP-AES and ICP-MS interelement corrections applied?	(Yes/No)	<u>YES</u>	_____
Were ICP-AES and ICP-MS background corrections applied?	(Yes/No)	<u>YES</u>	_____
If yes, were raw data generated before application of background corrections?	(Yes/No)	<u>NO</u>	_____

Comments:

THE "E" QUALIFIERS ON FORM I AND VIII FOR ALUMINUM, CHROMIUM, COBALT, COPPER, LEAD, NICKEL AND ZINC
INDICATE CHEMICAL OR PHYSICAL INTERFERENCE EFFECTS, WHICH WERE SUSPECTED DURING THOSE ELEMENTS'

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: _____

Date: _____

Name: PARVEEN HASANTitle: EPA PROJECT MANAGER

CHEMTECH

284 Sheffield Street

Mountainside, NJ 07092

SDG NARRATIVE

USEPA

SDG # MC0114

CASE # 38123

CONTRACT # EPW08065

LAB NAME: CHEMTECH CONSULTING GROUP

LAB CODE: CHEM

CHEMTECH PROJECT #Z5830

A. Number of Samples and Date of Receipt

20 Soil Samples were delivered to the laboratory intact on 12/11/08, 12/11/08 & 12/11/08.

B. Parameters

Test requested for ICP Metals CLP Full (by ICP-AES) & Hg.

C. Cooler Temp

Indicator Bottle: Presence/Absence

Cooler: 3°C, 3°C & 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

CHEMTECH
284 Sheffield Street
Mountainside, NJ 07092

G. Calculation:

Calculation example for ICP-AES Soil Sample:

Conversion of Results from mg/L or ppm to mg/kg (Dry Weight Basis):

Results reported in Mg/Kg = (Result in mg/L or ppm for ICP-AES) X 1000 X Fraction of % Solid (100/ % Solid) X Dilution Factor (if any) X Fraction of Sample Amount Taken in ICP-Soil Prep.

Example of Fraction of Sample Amount Taken in ICP-AES Soil Prep = 1/10 (1.0 X 10 or 0.50 X 20)

(if 1.0 g of sample taken during Digestion and the Final Volume was made to 100 ml or 0.5 g to Final Volume 50ml)

Or

Example of Fraction of Sample Amount Taken in ICP-AES Soil Prep = 1/10.2 (1.02 X 10 or 0.51 X 20)

(if 1.02 g of sample taken during Digestion and the Final Volume was made to 100 ml or 0.51 g to Final Volume 50ml)

Etc.

Calculation example for Hg Soil Sample:

Conversion of Results from ppb to mg/kg (Dry Weight Basis):

Results reported in Mg/Kg = (Result in ppb for Hg) X Fraction of % Solid (100/ % Solid) X Dilution Factor (if any) X Fraction of Sample Amount Taken in Prep.

Example of Fraction of Sample Amount Taken in Hg Soil Prep = 1/ 2 (0.2 X 10)

(if 0.2 g of sample taken during Digestion and the Final Volume was made to 100 ml)

Or

Example of Fraction of Sample Amount Taken in Hg Soil Prep = 1 / 2.1 (0.21 X 10)

(if 0.21 g of sample taken during Digestion and the Final Volume was made to 100 ml)

Etc.

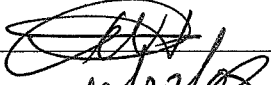
CHEMTECH

284 Sheffield Street
Mountainside, NJ 07092

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 the Silver. Duplicate sample did meet requirements. Serial Dilution did meet requirements except for the Aluminum, Chromium, Cobalt, Copper, Lead, Nickel & Zinc.

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 
Date 12/22/08

Name: Parveen Hasan

Title: Project Manager

CHEMTECH

QC: LB42097

25830

PERCENT SOLIDS

ANALYST: DD
DATE: 12/18/08

Lab ID	Client ID	Dish #	Dish Weight (g)	Dish Wt. + Sample (g)	Dish Wt. + Dry Sample (g)	% Solids
Z5830-01	MC0129	1	1.19	8.84	7.34	80.4
Z5830-02	MC0129D	2	1.17	8.7	7.18	79.9
Z5830-03	MC0129S	3	NR	NR	NR	NR
Z5830-04	MC0130	4	1.17	8.9	6.36	67.2
Z5830-05	MC0131	5	1.17	8.62	6.21	67.7
Z5830-06	MC0132	6	1.2	9.01	7.88	85.6
Z5830-07	MC0133	7	1.16	8.88	6.96	75.2
Z5830-08	MC0134	8	1.18	8.93	6.08	63.3
Z5830-09	MC0135	9	1.18	8.96	6.08	63.0
Z5830-10	MC0136	10	1.18	8.83	7.2	78.7
Z5830-11	MC0137	11	1.17	8.73	6.42	69.5
Z5830-12	MC0138	12	1.17	8.82	5.98	62.9
Z5830-13	MC0139	13	1.17	8.94	6.76	72.0
Z5830-14	MC0140	14	1.17	9.04	6.16	63.5
Z5830-15	MC0141	15	1.18	8.86	5.88	61.2
Z5830-16	MC0142	16	1.17	8.84	7.85	87.1
Z5830-17	MC0114	17	1.18	9	7	74.5
Z5830-18	MC0115	18	1.18	8.61	6.49	71.5
Z5830-19	MC0116	19	1.16	8.66	7.69	87.1
Z5830-20	MC0117	20	1.19	8.96	8.02	88.0
Z5830-21	MC0127	21	1.18	8.94	5.69	58.2
Z5830-22	MC0128	22	1.18	8.81	7.12	77.9
BLANK	DISH	B1	1.17	1.17	1.17	0.0
BLANK	DISH	B2	1.18	1.18	1.18	0.0

OVEN TEMP: 106°C
 TIME IN: 12/17/08 5:30AM
 TIME OUT: 12/18/08 9:30AM

SDG MC0118

CHEMTECH

284 Sheffield Street
Mountainside, NJ 07092

SDG NARRATIVE

USEPA
SDG # **MC0118**
CASE # **38123**
CONTRACT # **EPW08065**
LAB NAME: **CHEMTECH CONSULTING GROUP**
LAB CODE: **CHEM**
CHEMTECH PROJECT # **Z5831**

A. Number of Samples and Date of Receipt

04 Soil & 01 Water Samples were delivered to the laboratory intact on 12/11/08 & 12/11/08.

B. Parameters

Test requested for ICP Metals CLP Full (by ICP-AES) & Hg.

C. Cooler Temp

Indicator Bottle: Presence/Absence
Cooler: 4°C & 3°C

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

Issue 1: Samples MC0115, -123, and -129 are designated as laboratory QC on the TR/COC for the 24 soil samples received on 12/10/08. The laboratory would like to select samples MC0123 and MC0129 as laboratory QC and disregard sample MC0115 as laboratory QC.

Issue 2: The laboratory received 5 water samples on 12/10/08 that list the sample matrix as Surface Water and lists the analyses as ICP-AES (Al, Ca, Fe, Mg, K, Na) and ICP-MS Metals/Hg; however, sample MC0118 has a station location of FB-01, which the laboratory believes is a field blank sample. The Case is scheduled for five water samples for ICP-AES (Al, Ca, Fe, Mg, K, Na) and ICP-MS Metals/Hg analysis and one water sample for ICP-AES TM/Hg analysis. The laboratory would like to confirm that sample MC0118 is a field blank sample and should only perform the ICP-AES TM/Hg analysis instead of the ICP-AES (Al, Ca, Fe, Mg, K, Na) and ICP-MS Metals/Hg analysis.

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E. Corrective Action taken for above:

Resolution 1: 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.

Resolution 2: Per Region 3, the laboratory's proposed actions are acceptable. Sample MC0118 is a field blank sample and the laboratory should perform the requested ICP-AES TM/Hg analysis on the sample. The laboratory will note the issue in the Case/SDG Narrative and proceed with the analysis of the samples.

F. Analytical Techniques:

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

G. Calculation:

Calculation example for ICP-AES Soil Sample:

Conversion of Results from mg/L or ppm to mg/kg (Dry Weight Basis):

Results reported in Mg/Kg = (Result in mg/L or ppm for ICP-AES) X 1000 X Fraction of % Solid (100/% Solid) X Dilution Factor (if any) X Fraction of Sample Amount Taken in ICP-Soil Prep.

Example of Fraction of Sample Amount Taken in ICP-AES Soil Prep = 1/10 (1.0 X 10 or 0.50 X 20)

(if 1.0 g of sample taken during Digestion and the Final Volume was made to 100 ml or 0.5 g to Final Volume 50ml)

Or

Example of Fraction of Sample Amount Taken in ICP-AES Soil Prep = 1/10.2 (1.02 X 10 or 0.51 X 20)

(if 1.02 g of sample taken during Digestion and the Final Volume was made to 100 ml or 0.51 g to Final Volume 50ml)

Etc.

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

Calculation example for Hg Soil Sample:

Conversion of Results from ppb to mg/kg (Dry Weight Basis):

Results reported in Mg/Kg = (Result in ppb for Hg) X Fraction of % Solid ($100/\%$ Solid) X Dilution Factor (if any) X Fraction of Sample Amount Taken in Prep.

Example of Fraction of Sample Amount Taken in Hg Soil Prep = $1/2$ (0.2×10)
(if 0.2 g of sample taken during Digestion and the Final Volume was made to 100 ml)

Or

Example of Fraction of Sample Amount Taken in Hg Soil Prep = $1/2.1$ (0.21×10)
(if 0.21 g of sample taken during Digestion and the Final Volume was made to 100 ml)

Etc.

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)

CHEMTECH

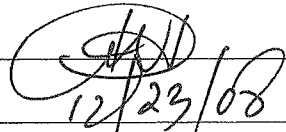
284 Sheffield Street
Mountainside, NJ 07092

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 the Silver. Duplicate sample did meet requirements. Serial Dilution did meet requirements except for the Aluminum, Cobalt, Copper, Lead & Zinc.

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


12/23/08

Name: Parveen Hasan

Date

Title: Project Manager

CHEMTECH

QC: LB 42097

Z5831

PERCENT SOLIDS

ANALYST: *PL*

DATE: 12/18/08

Lab ID	Client ID	Dish #	Dish Weight (g)	Dish Wt + Sample (g)	Dish Wt + Dry Sample (g)	% Solids
Z5831-01	MC0123	1	1.17	8.86	6.85	73.9
Z5831-02	MC0123D	2	1.19	9.03	7.04	74.7
Z5831-03	MC0123S	3 NR		NR	NR	NR
Z5831-04	MC0124	4	1.18	9.06	6.56	68.3
Z5831-05	MC0125	5	1.19	8.82	6.28	66.8
Z5831-06	MC0126	6	1.18	8.67	6.06	65.2
BLANK	DISH	B1	1.17	1.17	1.17	0.0

OVEN TEMP: 106°C

TIME IN: 12/17/08 5:30 PM

TIME OUT: 12/18/08 9:30 AM

Snehal Mehta

From: Walsh, Colin [cwalsh20@fedcsc.com]
Sent: Thursday, December 18, 2008 8:28 AM
To: Snehal Mehta
Cc: parveen; slizys.dan@epa.gov; Harris.Carroll@epamail.epa.gov; thaung.khin-cho@epa.gov; kwedar.john@epa.gov
Subject: Region 03 | Case 38123 | Lab CHEM | Issue Documentation | FINAL
Attachments: Case-38123-Soil and Water.pdf

Snehal,

Summary Start

-Insufficient/inappropriate designation of laboratory QC-

Issue 1: Samples MC0115, -123, and -129 are designated as laboratory QC on the TR/COC for the 24 soil samples received on 12/10/08. The laboratory would like to select samples MC0123 and MC0129 as laboratory QC and disregard sample MC0115 as laboratory QC.

Resolution 1: 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 samples MC0123 and MC0129 as laboratory QC and disregarded sample MC0115 as laboratory QC.

-Discrepancies with tags, jars, and/or TR/COC-

Issue 2: The laboratory received 5 water samples on 12/10/08 that list the sample matrix as Surface Water and lists the analyses as ICP-AES (Al, Ca, Fe, Mg, K, Na) and ICP-MS Metals/Hg; however, sample MC0118 has a station location of FB-01, which the laboratory believes is a field blank sample. The Case is scheduled for five water samples for ICP-AES (Al, Ca, Fe, Mg, K, Na) and ICP-MS Metals/Hg analysis and one water sample for ICP-AES TM/Hg analysis. The laboratory would like to confirm that sample MC0118 is a field blank sample and should only perform the ICP-AES TM/Hg analysis instead of the ICP-AES (Al, Ca, Fe, Mg, K, Na) and ICP-MS Metals/Hg analysis.

Resolution 2: Per Region 3, the laboratory's proposed actions are acceptable. Sample MC0118 is a field blank sample and the laboratory should perform the requested ICP-AES TM/Hg analysis on the sample. The laboratory will 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 further questions or problems.

Thanks,

Colin

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

-----Original Message-----

From: Slizys.Dan@epamail.epa.gov [mailto:Slizys.Dan@epamail.epa.gov]
Sent: Thursday, December 18, 2008 8:21 AM
To: Walsh, Colin